OPNAVINST 4790.15D
01 MARCH 2001

THE AIRCRAFT LAUNCH AND RECOVERY EQUIPMENT MAINTENANCE PROGRAM (ALREMP)

DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
WASHINGTON, D.C.

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IN REPLY REFER TO
OPNAVINST 4790.15D
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OPNAV INSTRUCTION 4790.15D

From: Chief of Naval Operations (N785)

Subj: THE AIRCRAFT LAUNCH AND RECOVERY EQUIPMENT MAINTENANCE PROGRAM (ALREMP)

Encl: (1) OPNAVINST 4790.15D ALREMP Revision Highlights
(2) Subject Program

1. Purpose. To revise the maintenance policies, procedures, and responsibilities for the conduct of the Aircraft Launch and Recovery Equipment Maintenance Program (ALREMP) at all levels of maintenance throughout the aircraft carrier and test facilities operational cycle.

2. Cancellation. OPNAVINST 4790.15B and OPNAV 4790.15C ADVANCE COPY.

3. Discussion. A brief summary of changes to the ALREMP is contained in enclosure (1). The ALREMP is provided as enclosure (2).

4. Scope. The ALREMP provides an integrated system for performing maintenance and related support functions on ship's installed aircraft launching and recovery systems and associated peripheral support systems and equipment. The provisions of the ALREMP also apply to Aircraft Launch and Recovery Equipment (ALRE) test facilities at Patuxent River, Maryland, and Lakehurst, New Jersey. Test facilities may apply to Commander, Naval Air Systems Command COMNAVAIRSYSCOM PMA251) for modifications and/or deviations as necessary to enable them to comply with program intent. This instruction outlines command, administrative and management relationships and establishes policies and procedures for the assignment of maintenance tasks and responsibilities for the ALREMP. The program encompasses equipment nominally managed under the auspices of COMNAVAIRSYSCOM and the Commander, Naval Sea Systems Command (COMNAVSEASYSCOM). The ALREMP establishes standard procedures to control maintenance, provides quality assurance verification of performance, and provides for a more effective Navy Ships' Maintenance and Material Management (3-M) System in compliance with OPNAVINST 4790.4D. The ALREMP encompasses all Navy activities concerned with the operation, rework, repair, production and support of carrier and test facilities aircraft

launch and recovery equipment, including catapults, arresting gear, visual landing aids (VLA), and associated deck gear and accessories. This instruction shall take precedence over all directives and instructions in conflict with its provisions. Because it is a dynamic program, the ALREMP will be revised and updated as necessary to incorporate improved methods and techniques. Specific questions of individual equipment applicability and program scope shall be forwarded to the Chief of Naval Operations (CNO) (N785) for determination.

5. Objectives. The ALREMP enhances aircraft carriers' and test facilities capability of meeting the expected threat and allows them to accomplish their assigned mission, with optimum use of manpower, facilities, material and funds. This is to be accomplished through policy guidance, technical direction, management, and administration of all programs affecting activities responsible for aircraft launch and recovery equipment (ALRE) maintenance, including associated materials and equipment. The ALREMP provides for the repair of ALRE and all associated equipment and material at the lowest maintenance level to ensure optimum use of resources, protection of systems from corrosive elements through an active corrosion prevention and control effort, and the application of a systematic planned maintenance program. It also includes the documentation, analysis, and use of pertinent data to effectively improve material readiness and safety, while simultaneously increasing management efficiency. A major direction of the program is to establish concepts of quality assurance as an all-hands effort, stressing an attitude of pride in workmanship.

6. Policies

a. All echelons of command shall develop and issue the necessary amplifying instructions to ensure that personnel, materials, training programs, and facilities assigned to support the ALREMP maintenance effort are used effectively and in accordance with their maintenance responsibilities.

b. Maintenance tasks will be assigned by specific levels as deemed necessary to support requirements assigned by the Secretary of the Navy (SECNAV) and the CNO. The CNO assigns tasks to the naval components of the operating forces; COMNAVAIRSYSCOM; COMNAVSEASYSCOM; the Commander, Space and Naval Warfare Systems Command (COMSPAWARSYSCOM); the Commander, Naval Supply Systems Command (COMNAVSUPSYSCOM); the Commander, Naval Reserve Force (COMNAVRESFOR); and the Chief of Naval Education and Training (CNET). COMNAVAIRSYSCOM develops and identifies ALRE and associated system maintenance functions that must be performed in order to carry out assigned maintenance tasks or responsibilities.

c. Request authority to deviate from the maintenance policies, procedures, and responsibilities issued by the ALREMP from CNO (Director, Air Warfare Division (N785) via the chain of command, with copies to COMNAVAIRSYSCOM (PMA-251), and the Naval Air Warfare Center Aircraft Division (NAVAIRWARCENACDIV) (Code 4.8.10) Lakehurst, NJ. Supply policies and procedures will conform to NAVSUP P-485, Afloat Supply Procedures (NOTAL).

7. Responsibilities

a. The CNO is responsible for the achievement of maximum operational readiness of naval systems and equipment under his cognizance. The ALREMP is sponsored and directed by the CNO. It is administered through the chain of command and is provided material and technical support by the cognizant systems commands.

b. COMNAVAIRSYSCOM is delegated program management responsibility for the ALREMP.

c. The NAVAIRWARCENACDIV, Lakehurst acts as the NAVAIRSYSCOM technical manager.

d. ALRE custodians are responsible for the material condition and operational readiness of assigned equipment unless otherwise directed or relieved of this responsibility by higher authority.

e. The maintenance responsibilities of each echelon of command are defined here. However, when temporarily required by operational or combat necessity, any appropriate operational authority may authorize or require the performance of any maintenance function or task that is within the capability of the personnel, materials, and facilities available.

f. An ALREMP Working Committee has been established under the sponsorship of the COMNAVAIRSYSCOM as follows:

(1) ALRE Program Manager (PMA-251) or designated representative, acts as chairperson of the ALREMP Working Committee.

(2) Commander in Chief, U.S. Atlantic Fleet (CINCLANTFLT); Commander in Chief, U.S. Pacific Fleet (CINCPACFLT); Commander, Naval Air Systems Command (COMNAVAIRSYSCOM); Commander, Naval Sea Systems Command (COMNAVSEASYSCOM); Commander, Naval Air Force, U.S. Atlantic Fleet (COMNAVAIRLANT); Commander, Naval Air Force, U.S. Pacific Fleet (COMNAVAIRPAC); Commander, Naval Reserve Force (COMNAVRESFOR); Commander, Naval Supply Systems Command (COMNAVSUPSYSCOM); and the NAVAIRWARCCENACDIV

(Code 4.8.10.5) Lakehurst, NJ, shall each provide one representative to serve on this committee.

(3) The primary function of the Working Committee is to recommend to CNO the policy and procedures required for the continued development, refinement, and use of the ALREMP in the operating forces and shore establishment of the Navy. The Working Committee is also responsible for addressing changes and corrections to the ALREMP submitted to CNO (N785).

(4) The ALREMP Working Committee normally meets annually, or as directed by the Chairperson.

8. Action

a. COMNAVAIRSYSCOM's ALRE Program Manager (PMA-251), is designated as coordinator of this instruction and shall develop and implement CNO-approved changes, issue interim message changes, process and coordinate requests for deviation, coordinate and incorporate corrections, and prepare approved changes for printing and distribution. Additionally, PMA-251 shall interpret ALREMP policy as required and will coordinate the Working Committee meetings.

b. NAVAIRWARCENACDIV Lakehurst will assist COMNAVAIRSYSCOM (PMA-251) in coordinating this instruction and will perform other functions/tasks as may be assigned.

c. COMSPAWARSYSCOM will provide assistance to fleet users of the ALREMP portion of the Organizational Maintenance Management System (OMMS), including the following:

(1) Reviewing recommended changes and corrections to documentation procedures and requirements for ALREMP.

(2) Developing recommended changes to source documentation and data processing requirements for ALREMP as required by CNO.

d. Naval Sea Logistics Center (NAVSEALOGCEN), Navy Maintenance Support Office (NAMSO), shall provide assistance and primary support incident to the 3-M System including the following:

(1) Serving as the Maintenance Data System (MDS) central data bank.

(2) Providing timely, accurate, and meaningful data products that are tailored to specific fleet requirements.

(3) Publishing the Equipment Identification Code (EIC) Index and related documents.

e. The Commander, Naval Safety Center (NAVSAFECEN); Commander, Naval Inventory Control Point, Philadelphia (NAVICP); Commander, Space and Naval Warfare Systems Command (SPAWAR); and the Commanding Officer, Naval Aviation Maintenance Support Office (NAMSO), shall each provide a representative to serve as technical advisors to the ALREMP Working Committee.

f. COMNAVAIRLANT and COMNAVAIRPAC shall provide ALRE Maintenance Management Teams to conduct assist visits and annual audits of all units to ensure operation/maintenance of ALRE is within the guidelines of this program.

g. Recommended changes to the policies and procedures in this instruction shall be submitted under the procedures contained in Chapter 1.

9. Implementation. Unless otherwise directed, this revision becomes effective 15 March 2001 and is to be implemented on that date.

10. Forms. Forms prescribed by this instruction are identified in appendices.

11. Reports. The reports required by this instruction are exempt from reports control by SECNAVINST 5214.2B.

NOEL G. PRESTON
Rear Admiral, U.S. Naval Reserve
Head, Aircraft Carriers and Air
Traffic Control Programs Branch

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21A2 (CINCPACFLT) (Code N43)
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23A2 (Naval Force Commander PAC) (COMNAVFORJAPAN, only)
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42D (Fleet Aviation Specialized Operational Training Group and Detachment)
42J (Carrier Air Wing) (CVW, CVWR)
42RR (Air Reserve Force)
C58D (Air Technical Training Center Detachment) (Lakehurst (Code T-00))
C58J (Air Maintenance Training Group Detachments) (Norfolk and San Diego only)
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FF8 (Inspection and Survey Board)
FKA1A (Air Systems Command) (Codes 00, 2.0, 3.0, 4.0, 6.0, PDA-12, PMA-205)
(PMA-251)
FKA1B (Space and Naval Warfare Systems Command) (PMW-164-2)
FKA1F (Supply Systems Command) (Code 412, 421C)
FKA1G (Sea Systems Command) (PMS-312) (04-TD)
FKM14 (Inventory Control Point) (Code 0501C, 03324.57)
FKP1H (Ordnance Disposal and Safety) (Concord Codes 512 and 532 only)
FKP8 (Shipbuilding, Conversion and Repair, USN) (SUPSHIPS: Jacksonville, Newport News, Portsmouth, San Diego, San Francisco, Puget Sound)
FKP21 (Sea Logistics Center) (Code 86)
FKR1B (Aviation Depots)
FKR6A (Air Warfare Center Aircraft and Training Systems) (Code 4.8.10.5) and (Patuxent River)
FKR7D (Air Technical Data and Engineering Service Command)
FT1 (Chief of Naval Education and Training) (Codes 311 and N531)
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OPNAVINST 4790.15D ALREMP Revision Highlights

Revision D to the Aircraft Launch and Recovery Equipment Maintenance Program (ALREMP) (OPNAVINST 4790.15D) replaces OPNAVINST 4790.15C **ADVANCE COPY** dated 28 February 1997 and includes the following:

General

1. Includes corrections to OPNAVINST 4790.15B and OPNAVINST 4790.15C **ADVANCE COPY**.
2. Revises NAVSUP ICPs and NAVAIRWARCENACDIV Lakehurst codes.
3. The major revision is the deletion of Chapter 9A due to all CV/CVNs replacing ALREMP ADP with SNAP I OMMS. The former Appendix Ba, Instructions for Completing OPNAV 4790/143 has also been deleted. Chapter 12 ALRE Maintenance Support has been rewritten in its entirety due to numerous changes, both in scope and depth, of the ALRE Maintenance Support Organization.

Chapter 1: Introduction and Guide for Using the Aircraft Launch and Recovery Equipment Maintenance Program (ALREMP)

1. Changes address for Commander, Naval Air Systems Command.
2. Changes ASO/SPCC to NAVICP Philadelphia and Mechanicsburg respectively.
3. Updates letter samples Figure 1-1,1-2 and 1-3 to reflect current instruction.

Chapter 2: Objective, Policy, and Responsibility for the ALREMP

1. No changes.

Chapter 3: Maintenance Concepts, Levels, and Types

1. Revises Paragraph 3.2.3 defining intermediate maintenance.
2. Revises Paragraph 3.3.3.1 adding NAVAIRWARCENACDIV to NAVAVNDEPOT VRTs.

Chapter 4: Organization for Aircraft Launch and Recovery Equipment Maintenance

1. Revises Paragraph 4.1.1 defining CNO responsibilities.
2. Revises Figure 4-2 ALRE Maintenance organizational chart.
3. Revises Paragraph 4.4.1.2 removing Pilot Landing Aid Television (PLAT).
4. Revises Figure 4-3 ALRE Supply Organization.
5. Revises Paragraph 4.4.2.3 f. adding NAVAIRWARCENACDIV VRT.
6. Revises Paragraph 4.4.4.1 adding NAVAIRWARCENACDIV Detachments in Norfolk and Mayport.
7. Revises Figure 4-4 NAVAIRSYSCOM ALRE Maintenance Organization.
8. Revises Paragraph 4.4.5.1 Naval Shipyards.
9. Combines Paragraph 4.4.5.5 with 4.4.5.3.
10. Revises Figure 4-5 NAVAIRWARCENACDIVADLKE Organization.
11. Revises Figure 4-6 NAVSEASYSCOM ALRE Maintenance Organization.

Chapter 5: Training

1. Revises Figure 5-1 ALRE Training Organization.
2. Revises Paragraph 5.3.4 f. removing aviation support equipment (SE).

3. Deletes Paragraph 5.5.3 "f" & "g" in its entirety.
4. Revises Paragraph 5.5.4 removing range of courses.
5. Revises Paragraph 5.10.2 removing NOTAL and FRAMP.
6. Revises Paragraph 5.10.3 by removing CNTECHTRA from the MTRR advisory committee.
7. Added c. to Paragraph 5.11.3.1 concerning required reading boards.
8. Revises 5.12.2.2 by and removing c., d. entirely.

Chapter 6: ALRE Maintenance Management Teams

1. Revises Paragraph 6.1.1 Changes ALRE maintenance management team members.
2. Revises Paragraph 6.2.1 briefing requirements.
3. Revises Paragraph 6.2.2 increased scope of ALRE maintenance management teams by including shore activities.
4. Revises Paragraph 6.3.1 increased scope of ALRE maintenance management teams by including shore activities.
5. Adds Paragraph 6.3.1 "i" reporting requirement to COMNAVAIRSYSCOM (PMA251) upon completion of formal audits.
6. Adds Paragraph 6.4.2 for notifying COMNAVAIRSYSCOM (PMA251) prior to formal audits.

Chapter 7: Special Programs

1. Add Paragraphs 7.8 through 7.8.3 The Installed/Discrepant Parts List (I/DPL).
2. Adds Note in Paragraph 7.8.2 for virus scan of I/DPL submissions.
3. Adds Paragraphs 7.9 through 7.9.3.2 The Automated Shot and Recovery Log Program (ASRL).
4. Changes Paragraph 7.9.1 main ALRE ASRL to ASRL Main.

Chapter 8: Maintenance Organization and Responsibilities

1. Updates Paragraph 8.2 Organization reference to four-catapult CV/CVN.
2. Updates and Reformats Figure 8-1 ALRE Maintenance Organization by deleting reference of the Below Deck and Topside Petty Officer.
3. Revises Paragraph 8.3.7 g. adding "all tasks requiring quality assurance inspection".

Chapter 9: Maintenance Control

1. Removes reference to SNAP I OMMS.
2. Revises Paragraph 9.1.3 removing 5MC speakers.
3. Revises Paragraph 9.4.4 adding "or assistant".
4. Revises Paragraph 9.5.4 adding colors green and yellow to MAF Card.
5. Revise Paragraph 9.5.4 removing locally established procedures.
6. Revises Paragraph 9.6.1 removing multi purpose 2-part form and changes 5 working days to 5 operating days.
7. Revises Paragraph 9.6.2 adding "and man-hour documentation.
8. Revises Paragraph 9.6.3 to reflect figures 9-7a through 9-7e.
9. Revises Figure 9-4. MAF CARD definition.
10. Revises Paragraph 9.8.2.c adding "and last accomplished".
11. Reformats and Updates Figure 9-6 Unscheduled (Corrective) Maintenance Procedures.
12. Reformats and Updates Figure 9-7 Scheduled Maintenance (PMS) Procedures.

13. Revises Paragraph 9.9.1 adding OPNAV 4790/160 form. Also adding directions from Paragraph 9.6.3.
14. Revises Paragraph 9.11.3 changing (SWLIN) to (ESWBS) Extended Ships Work Breakdown Structure.
15. Revises Paragraph 9.11.4.1 adding ESWBS.
16. Revises Paragraph 9.11.4.3 removing "retain PRS for history".
17. Revises Paragraph 9.11.6 d.(1) adding "and NDI documentation".
18. Reformats Figure 9-10 Sample Outside Maintenance Activity VIDS Board.
19. Revises Figure 9-11 changing SWLIN to ESWBS and removing 2-part ALRE MAF.
20. Revises Figure 9-12 changing SWLIN to ESWBS.
21. Adds first "Note" to page 9-12 regarding Progress Report Sheets.
22. Adds third "Note" to page 9-15 provisions for notifying the type commander if adequate QA personnel cannot be maintained for ship's force and shipyard maintenance actions.

Chapter 9A: Maintenance Control Using the ALREMP ADP Program

1. Chapter 9A has been deleted in its entirety.

Chapter 10: Material Control

1. Add Paragraph 10.2.4 augmentation of V-2 division by a rated storekeeper (SK).
2. Revises Paragraph 10.3.1 b. adding " Fleet Support Team (FST)"

Chapter 11: Quality Assurance

1. Revised entirely for inclusion of NAVAIR EI Website.
2. Updates Figure 11-15 ALRE Discrepancy Reports Matrix.
3. Added Figure 11-16 Fleet Support Team Response Matrix.

Chapter 12: ALRE Maintenance Support

1. Revises pages 12-1 through 12-8 in its entirety.
2. Updates Figure 12-1 Maintenance Support Organization.

Chapter 13: ALRE Maintenance Organizations and Responsibilities

1. Revises Paragraph 13.3.2 to reflect SIMA location changes.
2. Updates Figure 13-1 COMNAVAIRLANT ALRE Maintenance Organization.
3. Revises Paragraph 13.4.3.1 to reflect VRT location changes.
4. Revised Paragraph 13.4.4 to reflect shipyard changes.
5. Revises Paragraph 13.6.2 Changes to forward deployed CV.
6. Revises Paragraph 13.6.2.2 Changes to forward deployed CV.

Appendix A: Acronyms and Abbreviations

1. Contains general update.

Appendix B: Instructions for Completing OPNAV 4790/160

1. Contains general update.
2. Changes Block #40 for work center supervisor signature.
3. Increases the definition for the "P" "C" and "O" Block.

Appendix Ba: Instruction for Completing OPNAV 4790/143

1. Deleted in its entirety.

Appendix C: ALRE Malfunction and Corrosion Control Codes

1. No Changes.

Appendix D: Forms and Reports

1. Contains general update.

Appendix E: Sample ALREMP Forms

1. Figure E-1, Removed Workstations for Bridle Arrester and Chronograph. Added column for testing suspend switches.
2. Figure E-2, Added column for accounting of wing cover bolts.
3. Figure E-3, Removed Workstations for Bridle Arrester and Chronograph. Added F/A-18E/F to Launching Accessory Data.
4. Figure E-4, Added lines to write measurements.
5. Deleted Figure E-5, Linear Retraction Engine Data.
6. Changed Figure E-6 to E-5. Removed CSV Bottom Position and reversed Clock Times (Decreasing)
7. Changed Figure E-7 to E-6. Added PMS Being Performed.
8. Changed Figure E-8 to E-7. Added PMS Being Performed.
9. Changed Figure E-9 to E-8. Added PMS Being Performed.
10. Changed Figure E-10 to E-9. Added blocks for connector contract numbers.
11. Changed Figure E-11 to E-10.
12. Changed Figure E-12 to E-11.
13. Changed Figure E-13 to E-12.
14. Changed Figure E-14 to E-13. Added section for Topside Equipment.
15. Changed Figure E-15 to E-14. Added section for missing bolts and terminal to sheave measurement.
16. Changed Figure E-16 to E-15. Changed notes section.
17. Changed Figure E-17 to E-16.
18. Changed Figure E-18 to E-17. Added Notes.
19. Changed Figure E-19 to E-18.
20. Changed Figure E-20 to E-19. Add measurement areas.
21. Changed Figure E-21 to E-20.
22. Figure E-21, New form to document Engine Sheave Wear Data.
23. Figure E-22, New form to document Sheave Wear Data.
24. Added Figure E-28, IFLOS MK 13 Mod 0 Pole Check Data.

Appendix F: ALRE Technical Manuals

1.Contains general updates.

Appendix G: ALREMP Index

1. Deleted appendix G: in its entirety. Appendix H: changed to appendix G: which contains general updates.

RECORD OF CHANGES

CHANGE	DATE	SIGNATURE

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Chapter 1 - Introduction and Guide for Using the Aircraft Launch and Recovery Equipment Maintenance Program (ALREMP) Instruction

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Chapter 1

Introduction and Guide for Using the Aircraft Launch and Recovery Equipment Maintenance Program (ALREMP) Instruction

1.1 Introduction

1.1.1 The ALREMP is sponsored and directed by the Chief of Naval Operations (CNO). This instruction addresses the concepts, objectives, policies, programs, organizations, and responsibilities of the ALREMP.

1.2 How to Obtain Copies

1.2.1 To receive revisions and changes to this instruction automatically, a unit must be on the automatic distribution list maintained by CNO. To be included on the list or to change distribution requirements, submit a letter, with justification to:

Commander, Naval Air Systems Command
Aircraft Launch and Recovery Equipment, Code PMA251
Bldg. 2272 Suite 348
47123 Buse Rd. Unit IPT
Patuxent River, MD 20670-1547

1.2.2 Individual copies of this instruction for information or training purposes may be requested by letter to:

Commanding Officer
NAVICP Philadelphia, Code 0103
581 Tabor Ave
Philadelphia, PA 19120-5099

1.3 Guide for Using the ALREMP

1.3.1 This instruction is divided into 13 chapters.

1.3.2 Each chapter reflects segments of the maintenance organization.

1.3.3 Each paragraph is numbered with a decimal system. The first digit identifies the chapter, the second and subsequent decimals identify the paragraph and subparagraphs.

Chapter	1
Paragraph	1.1
Subparagraph	1.1.1
Subparagraph	1.1.1.1

1.3.3.1 To find a specific item of information, use the table of contents provided for each chapter which lists the paragraph, subject, and page number of material within that chapter.

1.3.4 Pages are numbered in a separate series for each chapter and appendix. The pages of each chapter are numbered in sequence and preceded by the chapter number, e.g., the third page in Chapter 1 is numbered 1-3.

1.3.5 Illustrations are provided to clarify or amplify text, and are located at the end of each chapter to which they apply. They are numbered consecutively within the chapter they appear.

1.4 Procedures for Recommending and Submitting Changes and Corrections to, or Requesting Deviations from the ALREMP

1.4.1 All recommended changes to this instruction are approved or disapproved by Chief of Naval Operations (CNO) (N785) after they have been evaluated by the ALREMP Working Committee. The Commander, Naval Air Systems Command (COMNAVAIRSYSCOM) (PMA251) is responsible for coordinating and managing these changes.

1.5 Definitions

1.5.1 Changes. A change is a modification to the content of the ALREMP involving a revision of " R," addition to " A," or deletion of " D " existing policies or procedures, and is issued in the form of replacement pages to the instruction.

1.5.2 Interim Changes. An interim change is a change issued by rapid means, usually by message, to correct a procedure, policy, practice, or situation adversely affecting operation, maintenance, equipment/personnel safety, readiness, or a critical function in the ALREMP.

1.5.3 Corrections. A correction is a modification in punctuation, grammar, capitalization, spelling, syntax or tense; or rectification of typographical errors, word omissions, or ambiguities not affecting policies or procedures.

1.5.4 Deviations. A deviation is a departure from policies, procedures, or responsibilities in the ALREMP. Deviations are granted by CNO for a situation or set of circumstances not requiring a revision of the ALREMP.

1.6 Submission of Recommendations/Requests

1.6.1 Changes. Recommendations to change policies/procedures in the ALREMP shall be submitted by naval letter to CNO (N785) via the

chain of command, with copies to COMNAVAIRSYSCOM (PMA251) and Naval Air Warfare Center Aircraft Division (NAVAIRWARCENACDIV) Lakehurst (Code 4.8.10.5). Figure 1-1 is a sample change recommendation letter.

1.6.2 Interim Changes. Any individual or activity having knowledge of any situation, procedure, or policy that adversely affects critical functions in the ALREMP shall report the information by naval message to COMNAVAIRSYSCOM (PMA251) with information copies to CNO (N785), NAVAIRWARCENACDIV Lakehurst (Code 4.8.10.5), and the chain of command.

1.6.3 Corrections. Recommendations to correct administrative discrepancies shall be submitted by naval letter directly to COMNAVAIRSYSCOM (PMA251) with a copy to NAVAIRWARCENACDIV (Code 4.8.10.5). Figure 1-2 is a sample correction recommendation letter.

1.6.4 Deviations. Requests to deviate from the ALREMP, with full justification, shall be submitted by naval letter to CNO (N785) via the chain of command, with copies to COMNAVAIRSYSCOM (PMA251) and NAVAIRWARCENACDIV Lakehurst (Code 4.8.10.5). Figure 1-3 is a sample deviation request letter.

1.7 Processing of Recommendations/Requests

1.7.1 Changes. Upon receipt of a change recommendation and its forwarding endorsements, COMNAVAIRSYSCOM acknowledges receipt of all change recommendations, reviews it, and coordinates as necessary with affected organizations. Change recommendations accepted for processing will then be assigned an ALREMP control number.

1.7.1.1 Upon completion of the review, COMNAVAIRSYSCOM will either:

a. Return the change recommendation for additional information, clarification, or cancellation, as applicable; or

b. Forward the change recommendation, including any comments, modifications, or recommendations developed during the review process, to the ALREMP Working Committee, and other activities as appropriate, for review and comments.

1.7.1.2 Upon receipt of comments from the ALREMP Working Committee, COMNAVAIRSYSCOM shall prepare and submit a consolidated change proposal to CNO (N785).

1.7.1.3 Upon receipt of a consolidated change proposal, CNO shall evaluate and approve/disapprove it or, if required, refer it to the ALREMP Working Committee for further review.

1.7.1.4 Upon final approval by CNO (N785), the change recommendation is returned to COMNAVAIRSYSCOM for inclusion in the next ALREMP change package.

1.7.1.5 Distribution of change packages shall be coordinated by COMNAVAIRSYSCOM with CNO (N785D) and SECNAV/OPNAV Directive Control Office.

1.7.2 Interim Changes. COMNAVAIRSYSCOM, upon receipt of a report identifying a situation, procedure, or policy that adversely impacts a critical function in the ALREMP, reviews the report and develops, if warranted, an interim change for release by CNO.

1.7.3 Deviations. CNO, assisted by COMNAVAIRSYSCOM, will verify and substantiate the need for requested deviations. Subsequent to this investigation CNO will approve/disapprove the deviation.

13800
CVN-71/03-V2 116823
Ser 738

USS THEODORE ROOSEVELT (CVN-71)
FPO AE 09599-2870

From: Commanding Officer, USS THEODORE ROOSEVELT (CVN-71)
To: Chief of Naval Operations (N785)
Via: Commander, Naval Air Force, U.S. Atlantic Fleet (Code N433)

Subj: CHANGE RECOMMENDATION TO OPNAVINST 4790.15D

Ref: (a) OPNAVINST 4790.15D

1. Recommend change to reference (a), Chapter 12, page 12-2, and paragraph 12.2, as follows:

a. Recommend adding the following sentence at the end of paragraph 12.2: "MS may be organized as a separate work center or integrated into existing organizations, depending upon physical plan and divisional requirements."

b. New weapon system equipment installations have eliminated workspaces on several CVs/CVNs, primarily in the Air Department. Combining the MS Branch with other work centers will allow integration into existing spaces and work force, where required.

2. Point of contact: C. D. Pendant, ABCM, deployed.

D. CABLE
By direction

Copy to:
COMNAVAIRSYSCOM (PMA251)
NAVAIRWARCENACDIV Lakehurst (Code 4.8.10.5)

Figure 1-1. Sample Change Recommendation Letter

13800
CV-63/03/Ser 163

USS KITTY HAWK (CV-63)
FPO AP 96634-2770

From: Commanding Officer, USS KITTY HAWK (CV-63)
To: Commander, Naval Air Systems Command (PMA251)

Subj: CORRECTION RECOMMENDATION TO OPNAVINST 4790.15D

Ref: (a) OPNAVINST 4790.15D

1. Recommend corrections to reference (a), Chapter 9, page 9-9, paragraph 9.2.3, as follows:

a. Correct the last sentence to read: "Each W/C is responsible for providing M/C with..."

b. Justification. "M/C" had been printed as "W/C".

2. Point of Contact: S. Plat, LTJG, ALRE Maintenance Officer.

F. LENS
By direction

Copy to:
NAVAIRWARCENACDIV Lakehurst (Code 4.8.10.5)

Figure 1-2. Sample Correction Recommendation Letter

13800
AIR-V2 168421

USS Dwight D. Eisenhower (CVN-69)
FPO AE 09538-3820

From: Commanding Officer, USS Dwight D. Eisenhower (CVN-69)
To: Chief of Naval Operations, (N785)
Via: (1) Commander, Carrier Group Three
(2) Commander, Naval Air Force, U.S. Atlantic Fleet
(Code N433)

Subj: REQUEST FOR DEVIATION FROM OPNAVINST 4790.15D
Ref: (a) OPNAVINST 4790.15D
Encl: (1) Block diagram of proposed maintenance reorganization

1. Request the following deviation from reference (a):
a. Request authority to deviate from the current maintenance organization authorized for USS Dwight D. Eisenhower (CVN-69). The proposed organization is shown in enclosure (1).

b. The requested change is necessitated by the loss of two Air Department spaces (03-116-M and 02-86-M) resulting from installation of SDI weapons system equipment. This loss precludes these spaces being assigned as the maintenance support work center and no other spaces are available. The reorganization would become effective immediately and would continue until additional space is provided during the Refueling Complex Overhaul (RCOH) in 2001.

c. The deviation requested would integrate the maintenance support work center into other work centers until space availability is resolved following ship alteration (SHIPALT) completion during the RCOH.

2. Point of contact: LCDR N. T. Catapult/CW02 W. Brake.

A. SHUTTLE
By direction

Copy to:
COMNAVAIRSYSCOM (PMA251)
NAVAIRWARCENACDIV Lakehurst (Code 4.8.10.5)

Figure 1-3. Sample Deviation Request Letter

Chapter 2 - Objective, Policy, and Responsibility for the ALREMP

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Chapter 2

Objective, Policy, and Responsibility for the ALREMP

2.1 Objective

2.1.1 The objective of the ALREMP is to achieve the established material readiness standards issued by the Chief of Naval Operations (CNO), with optimum use of manpower, material, and funds. CNO material readiness standards include the operational capability to launch and recover tactical aircraft whenever and wherever required to meet and sustain national interests; to provide the necessary level of maintenance and support required to meet those operational requirements; to establish quality assurance as an all-hands responsibility; to apply a systematic planned maintenance program; and to collect, analyze, and use data in order to effectively improve material condition and safety.

2.1.2 Specific objectives must be met in order to attain identified goals. Among these are:

a. Achieve and sustain maximum operational readiness of ALRE equipment in support of flight operations.

b. Achieve and maintain a zero maintenance error rate through use of standardized procedures, a dynamic quality assurance program, and analytical review of maintenance documentation and records.

2.2 Policy

2.2.1 For the maintenance, support, and operation of Aircraft Launch and Recovery Equipment (ALRE) it is CNO policy that:

a. Aircraft Launch and Recovery Equipment (ALRE)is an integral part of tactical naval aviation and shall be supported in the same relative priority as aircraft weapons systems.

b. Variations in organization, responsibilities and procedures shall be limited to those situations that are outside the scope of aircraft carrier (CV/CVN) operations. Any variations from standards herein shall require approval by CNO (N785).

c. Standard functional organizations will be established within existing constraints of resources, facilities, and equipment. All required functions will be accomplished in supporting ALRE maintenance and operations.

d. Intermediate level maintenance of ALRE equipment will be performed by designated operating and repair activities.

Intermediate level support requirements such as non-destructive test, inspection, and calibration shall be performed by the nearest intermediate level repair activity, i.e., Aircraft Intermediate Maintenance Department (AIMD), ship's engineering department, Shore Intermediate Maintenance Activity (SIMA), or repair tender.

2.3 Responsibility

2.3.1 ALRE maintenance is a command responsibility administered through the military chain of command. Technical management is exercised in consonance with this instruction, together with directives developed and published by COMNAVAIRSYSCOM, COMNAVSEASYSCOM, NAVAIRWARCENACDIV Lakehurst, and/or the TYCOMs.

2.4 Funding

2.4.1 CNO annually allocates materials and services for support of the ALREMP. Allocations are based upon competing requirements for the Navy's resources.

2.4.2 CNO distributes funds approved by Congress for Department of Defense (DOD) and Secretary of the Navy (SECNAV) program objectives. Funding for the ALREMP, included in a unit's operating target (OPTAR), is granted to operating ships and activities by the TYCOM. The OPTAR is an estimate of the amount of funds required by a ship or activity to perform its mission and is distributed quarterly. Further, sub-allocations are made into departmental/divisional OPTARs at the activity level. Activities are responsible to their respective TYCOMs for operating within the limitations of their individual OPTAR grants.

2.5 Manpower Management

2.5.1 CNO directs and coordinates the development and implementation of the manpower planning system to:

a. Determine minimum manpower requirements to achieve approved operational and mission demands.

b. Provide staffing standards based on functions performed.

c. Relate support manpower requirements of the shore establishment to the changing demands of the operating forces.

d. Ensure those manpower requirements for maintenance and operation of new weapons systems equipment and initiatives are specified sufficiently in advance of fleet introduction.

2.5.2 Manpower requirements are included in the DoD planning, programming, and budgeting system. This system operates on an 18-month cycle and is repeated annually.

2.5.3 CNO publishes annual guidance to manpower claimants. Manpower claimants screen, prioritize, and justify requests for additional manpower. Manpower requests that contribute to increased readiness have the highest chance of success for approval of funding.

2.6 Material Management

2.6.1 CNO directs and coordinates the development and implementation of the material acquisition planning system via the Systems Commands. Material requirements, like manpower requirements, are included in the DoD planning, programming, and budgeting system.

Chapter 3 - Maintenance Concepts, Levels, and Types

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Chapter 3
Maintenance Concepts, Levels, and Types

3.1 Maintenance Concepts

3.1.1 The Aircraft Launch and Recovery Equipment Maintenance Program (ALREMP) supports CNO readiness and safety objectives while providing for optimum use of manpower, facilities, material, and funds to meet operational requirements.

3.1.2 The ALREMP is based on the DoD three-level maintenance concept and is supplemented by CNO, COMNAVAIRSYSCOM, COMNAVSEASYSCOM, and TYCOM directives. It provides the management tools required for efficient and economical use of personnel and material resources in performing maintenance, and enables standardization in the ALRE community to accomplish mission requirements. It provides the basis for establishing standard organizations, procedures, and responsibilities for the accomplishment of all maintenance on aircraft launch and recovery equipment and associated material. The division of maintenance into three levels allows management to:

a. Assign maintenance tasks according to the complexity, depth, scope, and range of work to be performed.

b. Classify maintenance functions by levels.

c. Assign responsibility for maintenance functions to a specific level.

d. Accomplish any particular maintenance task or support service at that level which ensures optimum economic use of resources.

3.2 Maintenance Levels

3.2.1 ALRE maintenance is based on continuing operation in an environment approaching constant use of resources and equipment, on repetitive cycles. Reliability and safety of operation are the prime results of a successful maintenance program. These requirements are met through a planned maintenance system (PMS) defined in OPNAVINST 4790.4C and augmented by corrective maintenance when required. Maintenance will be performed at the lowest practical level, either organizational, intermediate, or depot level, in order to maintain the required readiness and material condition.

3.2.2 Organizational maintenance is that maintenance which is normally performed by the operating unit in support of its own operations. This work is usually accomplished by maintenance or

operator personnel assigned to the carrier's V-2 division; however, in some cases organizational maintenance may be done by intermediate or depot activities. Organizational maintenance functions generally can be grouped under the following categories:

a. Inspection, operation, and servicing as defined and required by the Planned Maintenance System (PMS).

b. Corrective and preventive maintenance, including on-equipment repair and removal/replacement of defective components.

c. Incorporation of technical directives (TDs), within prescribed limitations.

d. Record keeping and reports writing.

3.2.3 Intermediate maintenance is that maintenance that is normally performed by designated maintenance activities in support of fleet units. It consists of on/off-equipment repair/replacement of damaged or unserviceable components or assemblies, calibration, manufacture of certain parts, inspections, and technical assistance. Intermediate maintenance includes the following functions and services:

a. Repair, test, inspection, and modification of ALRE components and related equipment.

b. Calibration by field calibration activities (FCAs) which perform intermediate level calibration of designated equipment.

c. Technical assistance to supported activities.

d. Incorporation of TDs.

e. Manufacture of selected and non-available parts.

3.2.4 Depot maintenance is that maintenance which requires skills and facilities beyond organizational and intermediate levels and is performed by naval shipyards, commercial shipyards, Naval Ship Repair Facilities, contractor repair, NAVAIRWARCENACDIV Lakehurst Industrial, and by Voyage Repair Teams (VRTs) from specified NAVAIRWARCENACDIV/Naval Aviation Depots (NAVAVNDEPOTs). Depot maintenance is performed on ALRE requiring major overhaul or rebuilding of parts, assemblies, subassemblies, and end items. It includes major modifications, configuration changes, manufacture of parts, testing, inspecting, and all other repair, as required. Depot maintenance supports lower levels of maintenance by providing engineering assistance and performing maintenance beyond the

capability of lower level activities. Depot maintenance functions may be grouped as follows:

a. Overhaul and repair of ALRE.

b. Modernization, modification or conversion of system components.

c. Calibration (Type III) by Navy Calibration Laboratories (NAVCALABs), as well as standards laboratories (Type I and II).

d. Incorporation of TDs.

e. Manufacture of parts and/or accessory items.

f. Technical and engineering assistance.

3.3 Maintenance Types

3.3.1 There are two general types of ALRE maintenance performed without distinction as to levels of maintenance. They are upkeep and overhaul.

3.3.2 Upkeep is preventive, corrective, or additive work performed on ALRE by operating units under management of the TYCOMs. The term applies to any method of processing required to ensure completion of standard operating periods, including, but not limited to servicing, periodic inspections, functional and bench test, replacement, preservation, modification, and repair.

3.3.3 Overhaul is the process of disassembly sufficient to inspect all the operating components and the basic end article. It includes the repair, replacement, or servicing as necessary, followed by reassembly and functional test. Upon completion of the overhaul process, the equipment will be capable of performing its intended service life.

3.3.3.1 Overhaul may be performed on any type of launch and recovery equipment, associated systems and supporting assemblies. It is performed by industrial type activities assigned functional responsibility of providing maintenance program support. Overhaul is performed with civilian personnel managed by NAVAIRSYSCOM and NAVSEASYSCOM under CNO direction, and coordinated through the TYCOMs. Overhaul is normally a function of industrial and/or engineering activities, and the NAVAIRWARCENACDIV/NAVAVNDEPOT VRTs.

Chapter 4 - Organization for Aircraft Launch and Recovery Equipment Maintenance

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Chapter 4

Organization for Aircraft Launch and Recovery Equipment Maintenance

4.1 Command Structure

4.1.1 The Chief of Naval Operations (CNO) is responsible for the material condition, readiness and training of the operating forces of the Navy. The CNO carries out these responsibilities through the direction of the Naval Systems Commands, as well as the Fleet and Type Commanders, and their supporting subordinate commands and offices. In addition, the CNO commands such shore activities as assigned by the Secretary of the Navy (SECNAV).

4.1.2 CNO is responsible for the disciplined use of resources and the operating efficiency of all commands and activities under his/her command. Figure 4-1 shows the CNO command organization.

4.1.3 The Director, Air Warfare Division (N78), establishes policy, requirements, and priorities for carrier operations and maintenance. N78 is also responsible for programming the resources to support the Aircraft Launch and Recovery Equipment (ALRE) program.

4.1.4 The Director, Surface Warfare Division (N76), establishes policy, requirements, and priorities for surface ships maintenance and is responsible for programming resources for Shore Intermediate Maintenance Activities (SIMAs).

4.2 Command Relationships

4.2.1 Command relationships and the exercise of command responsibilities for Navy shore activities are in SECNAVINST 5400.14A and are not affected by this instruction.

4.2.2 Figure 4-2 is provided to illustrate the command relationships for ALRE maintenance.

4.3 Command Responsibilities

4.3.1 The aviation type commanders (TYCOMs), Commander, Naval Air Force, U.S. Atlantic Fleet (COMNAVAIRLANT) and Commander, Naval Air Force, U.S. Pacific Fleet (COMNAVAIRPAC), shall support the ALREMP by achieving CNO-directed readiness objectives and safety standards while optimizing total resource requirements. This responsibility includes repair of ALRE equipment at the most economical level of maintenance. It also includes the efficient use of data as a management tool to improve equipment material condition and safety. Program responsibilities include funding, manpower management, training and material management. Aviation TYCOMs are the

logistics agents for aeronautical equipment in the Atlantic and Pacific Fleets and provide technical liaison with surface type commanders, systems commanders and their shore activities, and fleet carriers. Aviation TYCOMs are responsible for ensuring sound ALRE maintenance procedures and practices. Their functions include approving technical availabilities analyzing malfunction reports, screening ship's work requests (OPNAV 4790/2K) for accomplishment by ship's force, intermediate and depot level maintenance activities, controlling NAVAIRSYSCOM service change material, and coordination of NAVAIRWARCENACDIV Lakehurst's Carrier and Field Service Units (CAFSUs) support.

4.3.2 Carrier group commanders (COMCARGRUs) are responsible for the overall functional and operational condition of ships under their cognizance with special emphasis on planning efforts prior to deployments. The commanding officer of a ship is ultimately responsible for the maintenance and material condition of the ship's ALRE.

4.3.3 Each fleet aircraft carrier (CV/CVN) is designated by OPNAVINST 4700.7J as an intermediate maintenance activity (IMA) comprised of the aircraft intermediate maintenance department (AIMD), and engineering, supply and weapons departments. AIMDs and the repair divisions of the engineering departments will provide appropriate ALRE intermediate maintenance support, where capability and capacity exist.

4.4 Support Responsibilities

4.4.1 The Commander, Naval Supply Systems Command (COMNAVSUPSYSCOM) provides material in support of the operation and maintenance of aircraft launch and recovery equipment. Every effort is made to have material located when and where it is needed. The ALRE supply organization is shown in Figure 4-3.

4.4.1.1 NAVICP Philadelphia is the primary Navy inventory control point (ICP) responsible for ALRE material support of the ALREMP. ALRE material consists of spares and repair parts for catapults, arresting gear, visual landing aids (VLA), and support equipment (SE), common and peculiar. NAVICP Philadelphia’s responsibilities include:

a. Computation of ALRE material requirements in both range and depth. This responsibility includes conducting and coordinating provisioning conferences and the identification and transfer of items to be managed by the Defense Logistics Agency (DLA) and other cognizant inventory control points (ICPs).

b. Budgeting for and funding of appropriate ALRE material requirements.

c. Procuring material directly from industry or via other government agencies.

d. Allocating NAVAIRSYSCOM-procured material to stock points, distribution of material to fill replenishment stock requirements, and referral of requisitions to stock points to meet requirements.

e. Directing the proper disposal of defective ALRE material when authorized by NAVAIRWARCENACDIV Lakehurst.

f. Maintaining ALRE spares and associated spare parts lists/ordering information. The catalog function includes obtaining National Stock Numbers (NSNs) from the Defense Logistics Service Center (DLSC).

g. Determining wholesale system supply asset repair/rework requirements of repairable components to be processed by naval or commercial repair/rework facilities.

h. Providing areas of interest data to NAVICP Mechanicsburg, to maintain allowances for ALRE material in support of the CV/CVN Coordinated Shipboard Allowance List (COSAL).

4.4.1.2 NAVICP Mechanicsburg, is a field activity of NAVSUPSYSCOM located at Mechanicsburg, PA. NAVICP Mechanicsburg, is the ICP for Integrated Launch and Recovery Television Surveillance System (ILARTS) and catapult trough components; its ALRE responsibilities include those listed for NAVICP Philadelphia, in paragraph 4.4.1.1 and:

a. Maintaining the CV/CVN COSAL. The COSAL is a technical and supply management document designed to enable ships to achieve maximum operating capability for extended periods, independent of external logistic support.

4.4.2 The Commander, Naval Air Systems Command (COMNAVAIRSYSCOM) is responsible for research, design, development, test, acquisition, and logistics support of all ALRE, associated material, and equipment. Figure 4-4 shows the COMNAVAIRSYSCOM organization as it pertains to ALRE.

4.4.2.1 As the technical manager for ALRE maintenance, COMNAVAIRSYSCOM:

a. Provides technical direction, guidance on procedures, and management review for each level of maintenance.

b. Provides ALRE maintenance procedural documents sufficient to clearly define the maintenance functions, organizations, and responsibilities to perform these functions.

c. Implements, manages, and maintains the ALREMP.

d. Assists CNO and others in developing training programs for officer and enlisted personnel assigned to ALRE maintenance.

e. Provides ALRE maintenance material allowance lists, together with lists of facilities that are authorized, available and required.

f. Makes recommendations concerning design of the ALRE Maintenance Data System (MDS) to reduce redundant, time consuming, and unnecessary reporting, and to ensure MDS is compatible for all three levels of maintenance as well as the Ships' 3-M System.

4.4.2.2 COMNAVAIRSYSCOM provides ALRE technical direction as directed by CNO. A major portion of this effort is done using a centralized system for the issue and control of technical directives (TDs). Technical direction does not relieve commands from the responsibility of keeping seniors in the chain of command informed of material conditions affecting operational readiness. CNO, COMNAVAIRSYSCOM, and other interested commands must be kept fully informed if operational necessity precludes TD compliance within specified time limits. Any authority operating or having operational control over ALRE has full authority and responsibility to impose such additional operating restrictions as may be prudent. TYCOMs shall be concerned with technical direction matters. Requests for changes and amplification to technical direction shall be addressed to COMNAVAIRSYSCOM. When fleet operational requirements cannot be met as a result of limitations imposed by technical direction, recommendations shall be provided to CNO.

4.4.2.3 Program Management/NAVAIR Acquisition Executive (AIR-1.0), the Aircraft Launch and Recovery Equipment (ALRE) Program Office (PMA251) is responsible for providing the material acquisition and logistics support functional management for ALRE installed in ships, in aircraft, and ashore from inception through service life of the systems involved. Responsibilities include:

a. Certifying the safety and operability of ship's installed ALRE systems.

b. Coordinating the shipboard installation of all COMNAVAIRSYSCOM cognizant equipment in ships.

c. Developing the total aviation facilities requirements data package for integration into any Navy ship design.

d. Ensuring compatibility of ship and aircraft installed automatic carrier landing systems (ACLSs).

e. Representing AIR-4.0 on the Ship Acquisition and Improvement Panel of the CNO Executive Board.

f. Providing technical direction to the NAVAIRWARCENACDIV Lakehurst and its CAFSU organization and exercising technical cognizance of Naval Aviation Depot (NAVAVNDEPOT)/Naval Air Warfare Center Aircraft Division (NAVAIRWARCENACDIV) Voyage Repair Team (VRT) operations worldwide.

g. Acting as the COMNAVAIRSYSCOM ALREMP manager.

4.4.3 COMNAVAIRSYSCOM has command and support responsibility over the NAVAIRWARCENACDIV Lakehurst. This enables NAVAIRSYSCOM Headquarters to fulfill its role in matters pertaining to ALRE maintenance and material support for fleet readiness.

4.4.3.1 NAVAIRWARCENACDIV Lakehurst is the cognizant field activity (CFA) for aircraft launch and recovery equipment under COMNAVAIRSYSCOM. It is responsible for research, engineering, development, test and evaluation, systems integration, limited production, procurement, overhaul/repair, and in-service engineering of ALRE. It also provides technical and logistic support to all activities in support of installation, operation, overhaul, maintenance, repair and certification inspections of ALRE, and provides representatives to the Board of Inspection and Survey (INSURV). CAFSUs are the technical representatives of NAVAIRWARCENACDIV Lakehurst and coordinate support efforts between NAVAIRWARCENACDIV Lakehurst, fleet, and support activities. Figure 4-5 depicts the NAVAIRWARCENACDIV Lakehurst organization.

4.4.4 COMNAVAIRSYSCOM has command and support responsibility over the NAVAVNDEPOT/NAVAIRWARCENACDIV designated as ALRE Depot Maintenance Activities. These industrial establishments, through their VRTs, perform a complete range of repair operations on ALRE.

4.4.4.1 NAVAVNDEPOT/NAVAIRWARCENACDIV VRTs are small groups of shipyard trade specialists who are cross-trained and capable of functioning in two or more trades. VRT shall be overseen by a NAVAIRWARCENACDIV CAFSU Representative to ensure ALRE Maintenance standards established by NAVAIRWARCENACDIV Lakehurst are

maintained. VRTs are established at the NAVAVNDEPOT in North Island, CA and at NAVAIRWARCENACDIV detachments in Norfolk, VA and Mayport, FL. VRT personnel perform designated depot level maintenance, repair, refurbishment, replacement and modification tasks in direct support of NAVAIRSYSCOM shipboard and shore-based ALRE installations. Artisans are responsible for ensuring the proper quality assurance inspections of all work performed per established procedures.

4.4.5 Commander, Naval Sea Systems Command (COMNAVSEASYSCOM) has responsibility for ALRE equipment foundations, components of the catapults steam system prior to the launch valve, high pressure air for hydraulic systems, electrical power, stabilization inputs to VLA systems from the ship's stable element, and interior communications to all areas. NAVSEASYSCOM also prepares ship alterations to ALRE, as recommended by NAVAIRSYSCOM, authorizing the depot maintenance activities concerned to make approved alterations. Naval shipyards and NAVSEASYSCOM shore activities are primary designated overhaul points (DOPs) for ALRE. Figure 4-6 shows the NAVSEASYSCOM ALRE maintenance organization.

4.4.5.1 Naval Shipyards (NAVSHIPYDs). The NAVSHIPYDs, located at Bremerton (including San Diego detachment) and Norfolk, furnish depot level repair facilities and technical guidance for availabilities and overhaul periods. These activities perform major repairs, modifications and overhauls to ALRE and are responsible for the proper installation, alteration and test of this equipment under current drawings and directives.

4.4.5.2 Fleet Technical Support Centers (FTSCs) are shore activities of NAVSEASYSCOM. The FTSC, Atlantic is located at St. Julien's Creek Annex, Norfolk, VA and FTSC, Pacific is located in San Diego, CA. The FTSCs, using technical data received from NAVAIRWARCENACDIV Lakehurst, are responsible for maintaining ALRE Maintenance Requirement Cards (MRCs).

4.4.5.3 Supervisors of Shipbuilding, Conversion, and Repair, USN, (SUPSHIPS) are NAVSEASYSCOM shore activities which award and administer Navy and other Department of Defense ship-building, design, conversion, repair, and facility contracts at commercial shipyards. SUPSHIP responsibilities include approval of certain design plans, inspections, tests and certifications. The SUPSHIP office also functions as a procurement activity and administers the Commercial Industrial Services (CIS) program, integrates the requirements of several commands and manages the planning and engineering efforts for overhauls and availabilities.

4.4.5.4 The Naval Sea Logistics Center (NAVSEALOGCEN), and Navy Maintenance Support Office (NAMSO) are a field activities of

COMNAVSEASYSCOM and serves as the Maintenance Data System central data bank for the Ships' 3-M system.

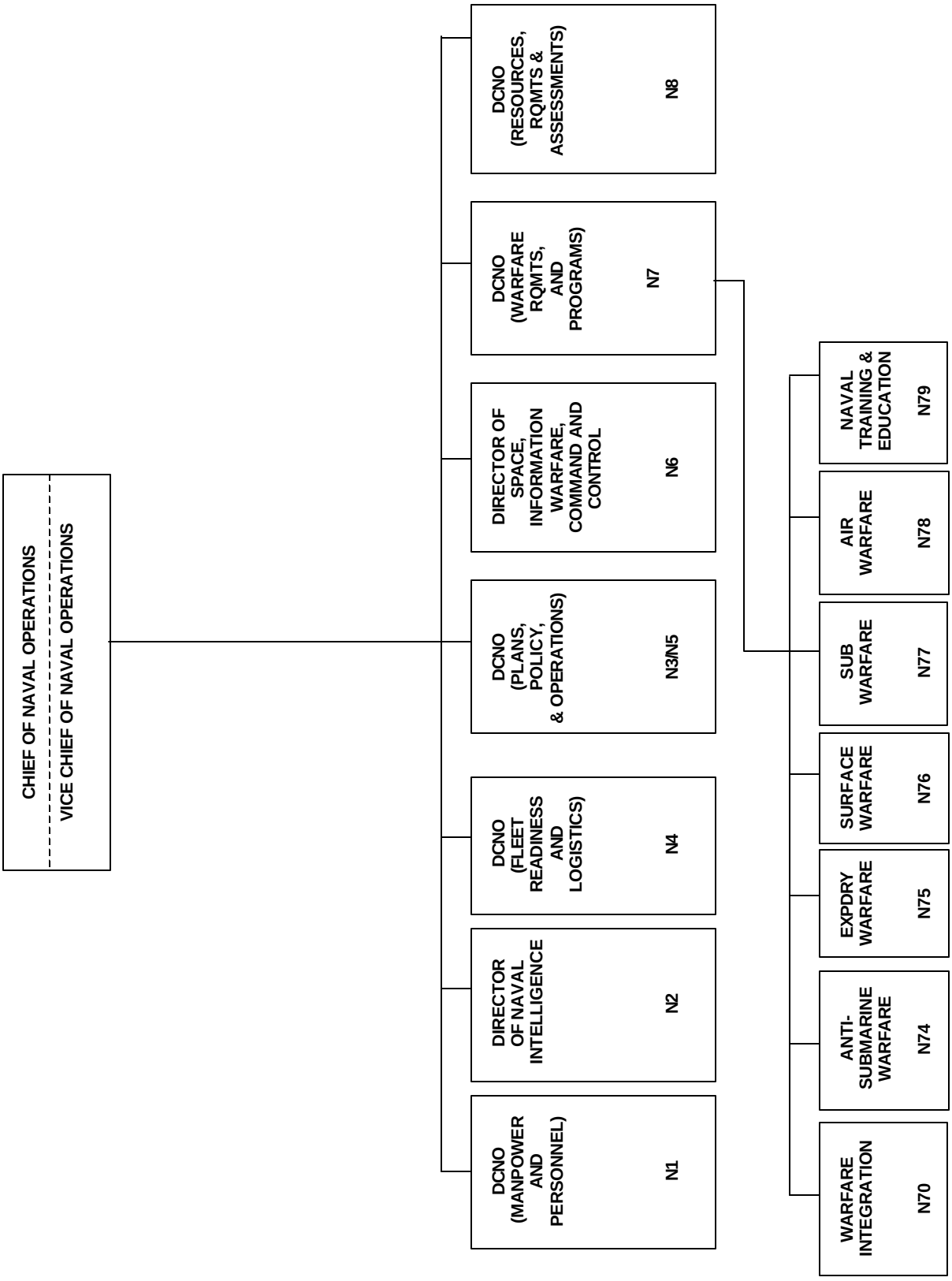

Figure 4-1. Office of the Chief of Naval Operations Organization

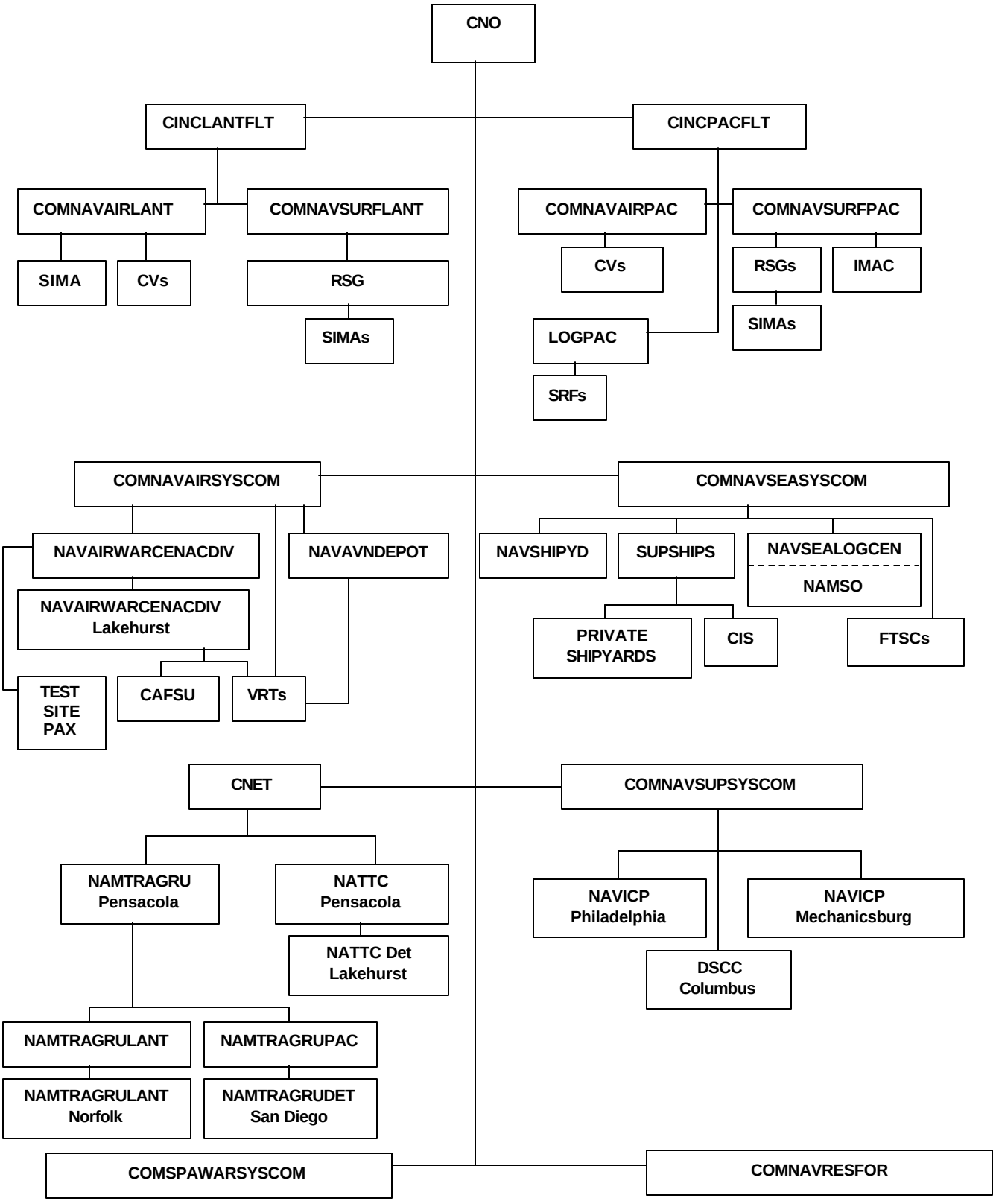

Figure 4-2. ALRE Maintenance Organization

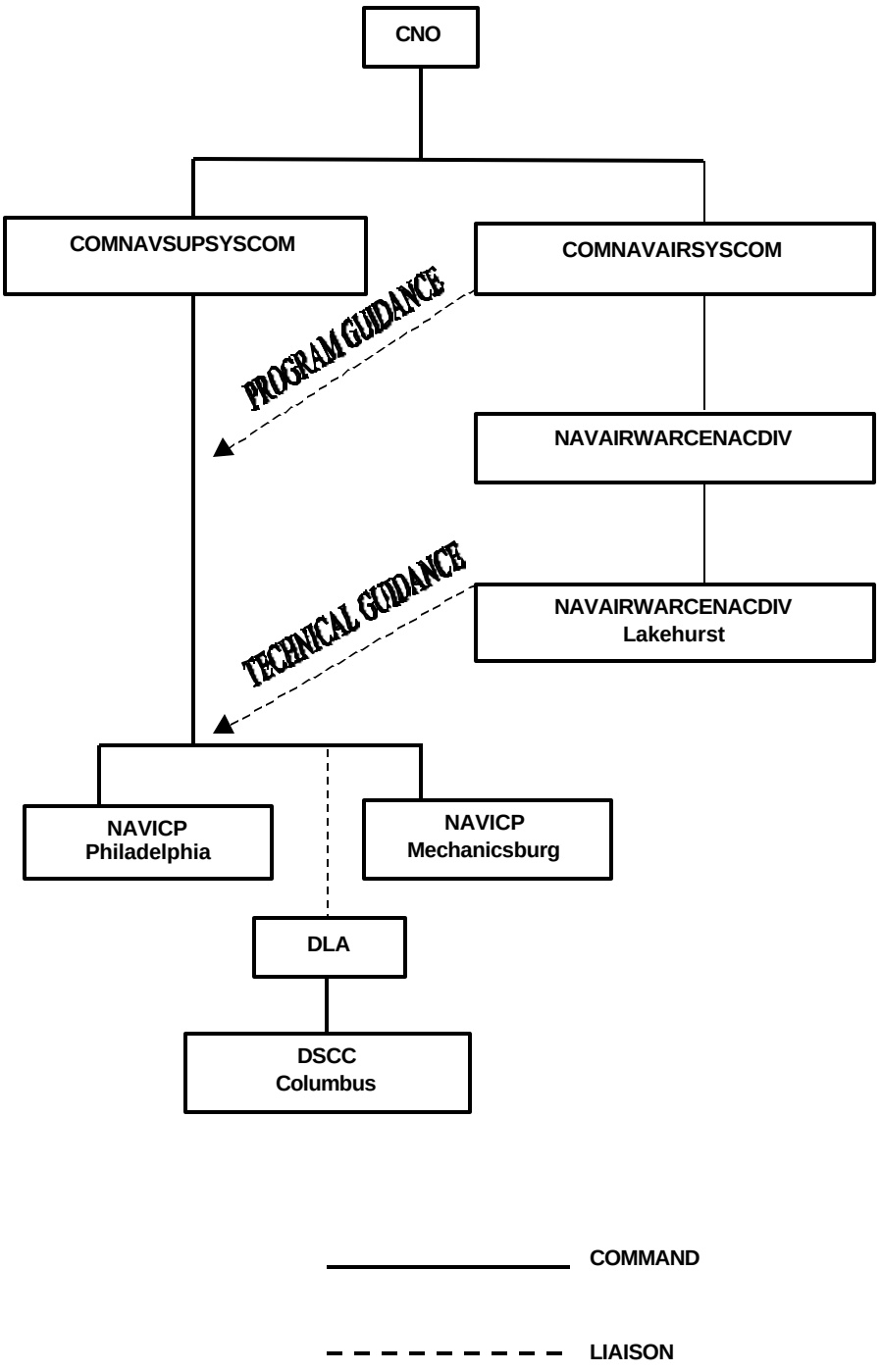

Figure 4-3. ALRE Supply Organization

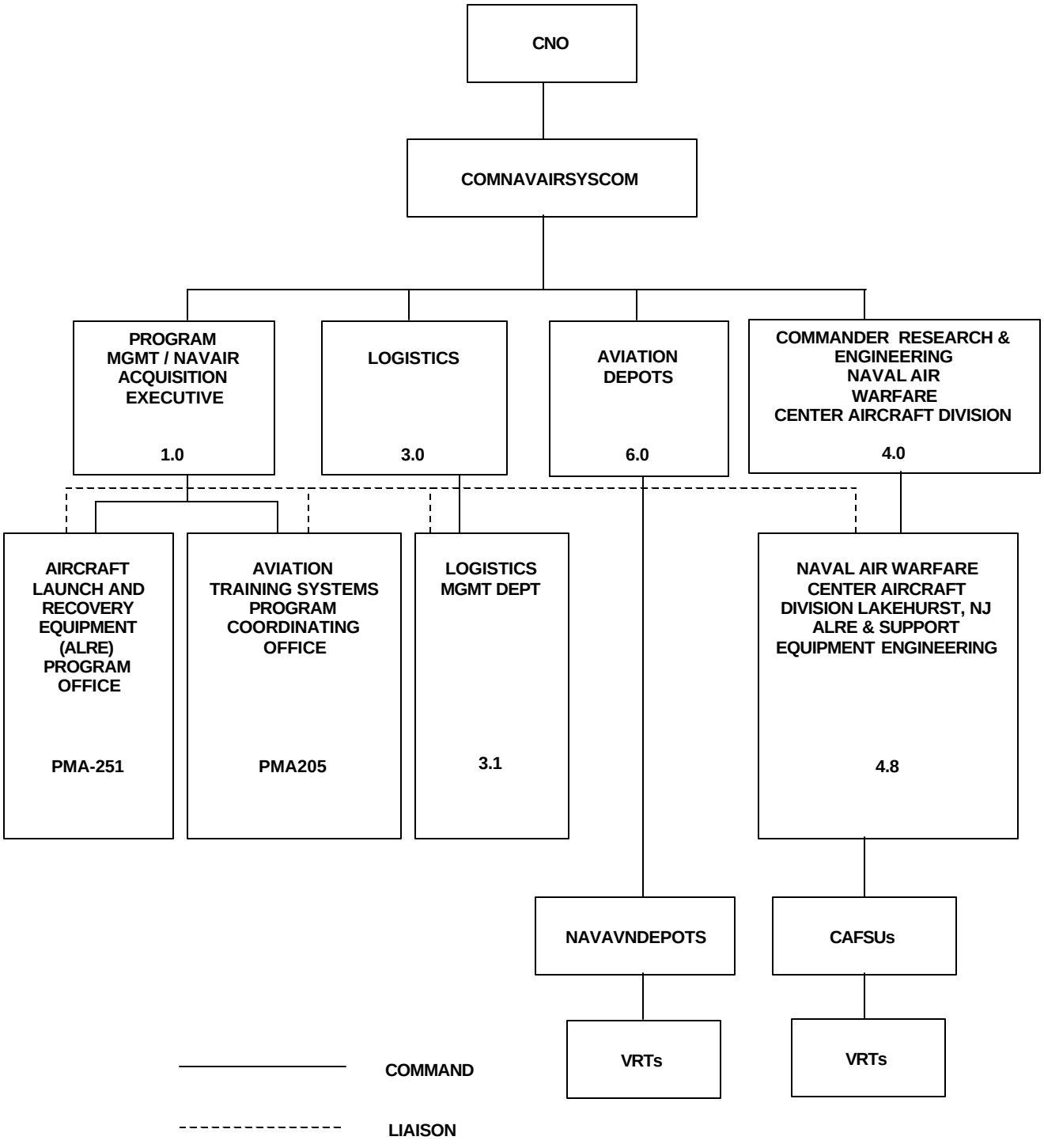

Figure 4-4. NAVAIRSYSCOM ALRE Maintenance Organization

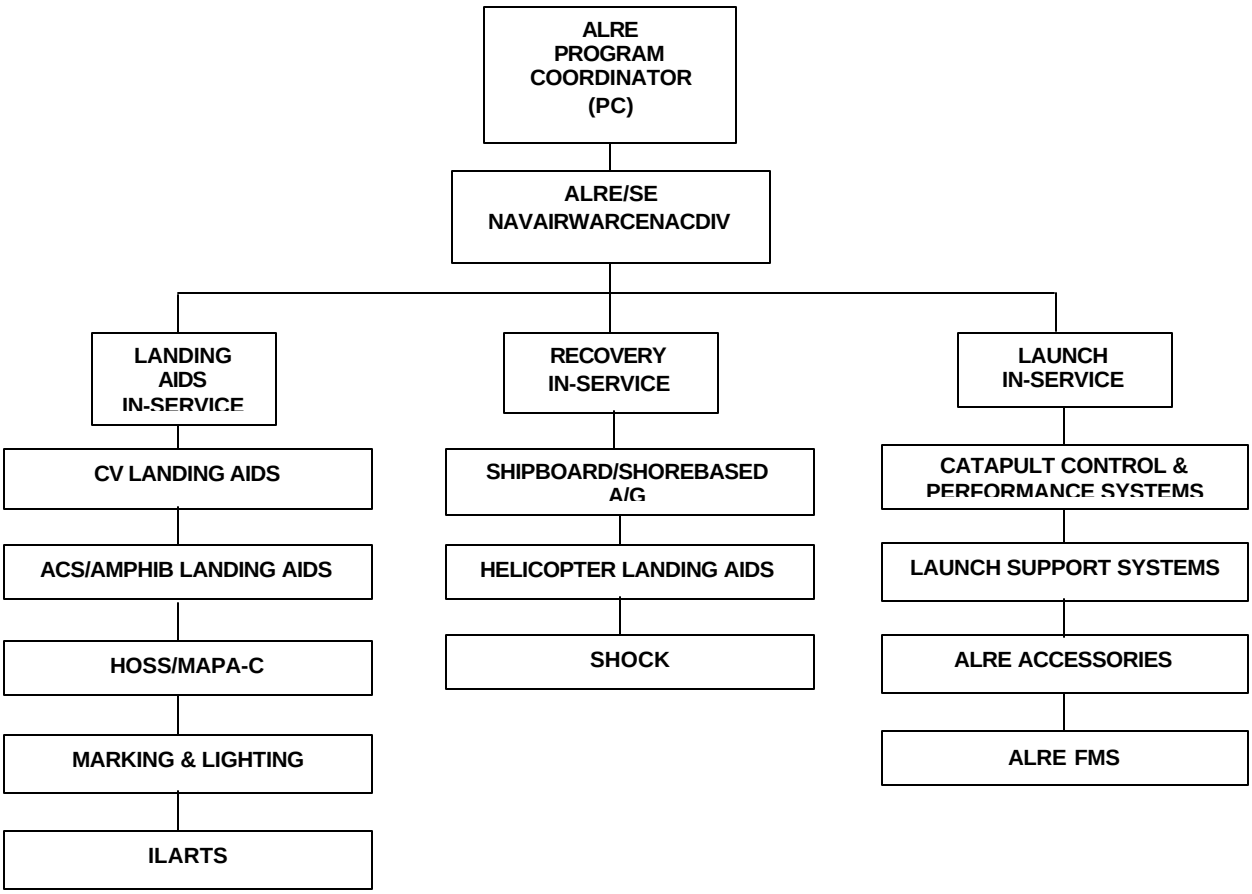

Figure 4-5. Naval Air Warfare Center Aircraft Division (NAVAIRWARCENACDIV) Lakehurst Organization

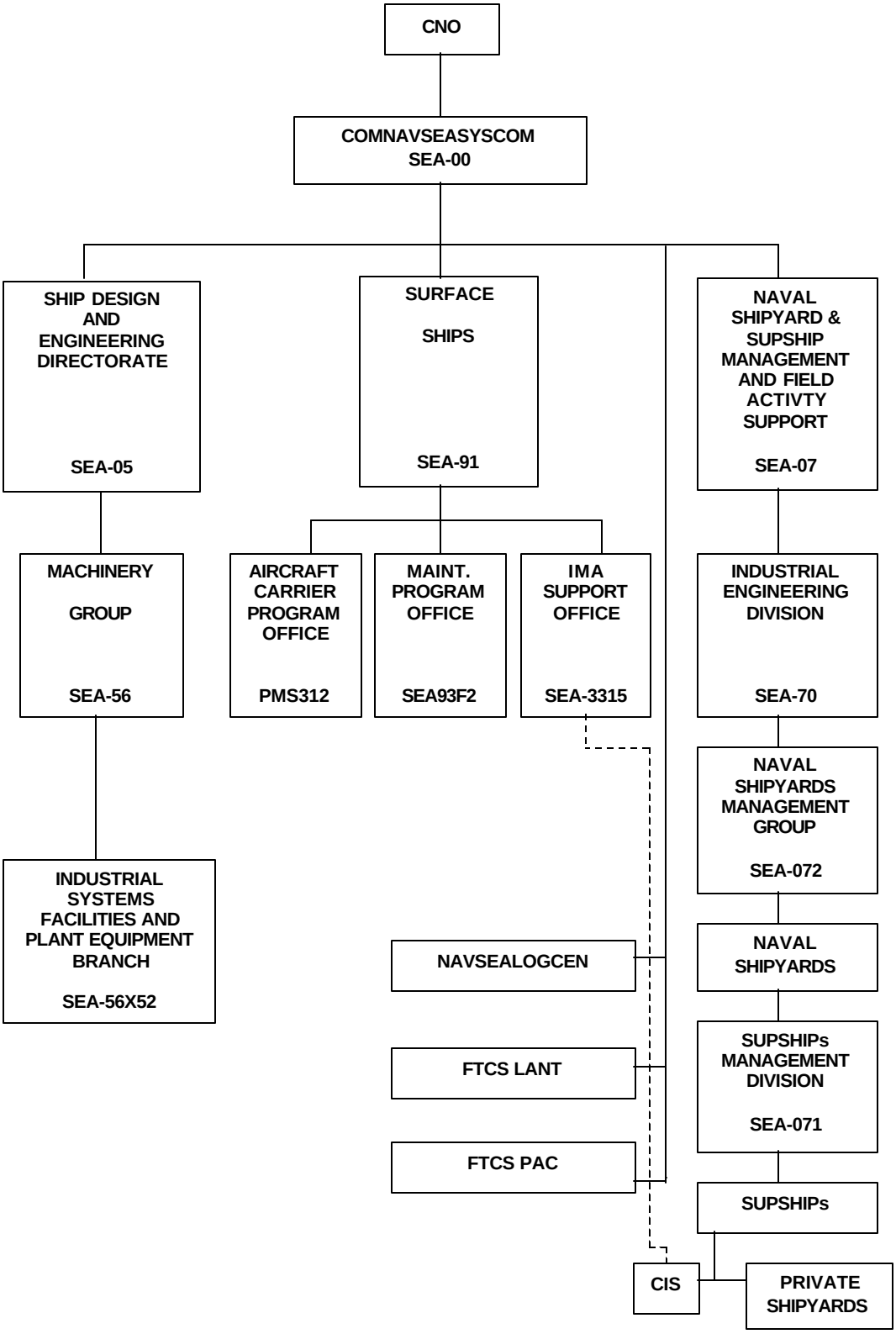

Figure 4-6. NAVSEASYSCOM ALRE Maintenance Organization

Chapter 5 - Training

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Chapter 5

Training

5.1 Navy Training Plan (NTP) & Naval Aviation Training Program

5.1.1 The NTP is a NAVAIRSYSCOM-developed document which lists the multiple elements required for life cycle support of new aircraft, systems, subsystems, or equipment. Development, approval, and implementation procedures are provided in OPNAVINST 1500.76. The NTP is the official statement of billets, personnel, and training input and resource requirements to support the introduction and operational use of aircraft, systems, subsystems, equipment, and other developments, including non-hardware related developments. The NTP assigns responsibilities for the planning, programming, and implementing actions necessary to provide required support to ensure:

a. Coordination of billets, personnel, military construction, training support, and training planning concurrently with hardware development and production.

b. Efficient and adequate training programs coincident with the introduction of aircraft, systems, subsystems, equipment, or other developments or modifications to existing systems or equipment.

c. Support of the policies established for system acquisition within the Navy Department.

5.1.2 The Naval Aviation Training Program requires that billets, personnel, military construction, training support, and training planning be performed concurrently with hardware development and production. Further, training programs will be phased in with adequate lead times to meet the introduction of new aircraft, systems, subsystems, and related equipment. Program organization and management shall be complementary and coordinated to provide for minimizing operating costs, personnel movement, training pipeline time, training billets, and special manning requirements. The program is designed to ensure basic, intermediate, advanced, and in-depth levels of training for all maintenance personnel to support existing, planned, and future weapon system acquisitions.

5.2 Command Relationships

5.2.1 Command relationships are based on lines of authority among various echelons as well as among various administrative and support activities. Many echelons are involved in training aviation maintenance personnel. Liaison is maintained across all

levels of command. Figure 5-1 illustrates the coordination relationships that exist in ALRE maintenance training.

5.3 Command Responsibilities

5.3.1 The Chief of Naval Operations (CNO) is responsible for training naval personnel and for directing the various commands and offices that provide resources required to implement the training program.

5.3.2 The Director, Air Warfare Division (N78) is responsible for:

a. The establishment of policy, requirements, and priorities for aviation training and the development of aviation training plans.

b. The supervision and direction of aviation training, including formal technical class A school training provided by the Chief of Naval Education and Training (CNET); the supervision and direction of Type Commander (TYCOM) aviation training; the approval of establishment, disestablishment, and modification of training programs; the programming of aviation training resource requirements, including training manpower; and approval or disapproval of Naval Air Technical Training Center (NATTC) Pensacola, Naval Air Technical Training Center Detachment (NATTC DET) Lakehurst, and Naval Air Maintenance Training Group Detachment (NAMTRAGRUDET) (Norfolk and San Diego) course establishment, disestablishment, and revision.

5.3.3 The DCNO (Manpower and Personnel) and Director, Naval Training and Education (N79), together with the Bureau of Naval Personnel (BUPERS):

a. Participates in personnel and training planning, in the development and review of Navy Training Plans (NTPs), and in meeting personnel inventory and skills requirements to support introduction of new acquisitions.

b. Performs occupational task analysis as specified by CNO in support of new systems and aviation training requirements.

5.3.4 The Commander, Naval Air Systems Command (COMNAVAIRSYSCOM):

a. Performs research, design, development, test, acquisition, and logistic support of all naval aviation weapon systems and associated material and equipment.

b. Initiates development of recommended NTPs for new weapon systems and components requiring establishment of in-house Navy training in accordance with OPNAVINST 1500.8M (NOTAL).

c. Initiates action for development, procurement, installation, maintenance, and repair of equipment required in support of aviation training programs.

d. Reviews existing training programs and curricula for technical adequacy and availability of suitable training equipment.

e. Provides for factory and other specialized contract training. Arranges for inter-service training where required.

f. Provides maintenance and logistics support of maintenance trainers required by fleet training activities.

5.3.5 The Director, Naval Training and Education (N79):

a. Provides formal training for the operating forces.

b. Establishes procedures for the regular validation and review of assigned training programs.

c. Provides necessary planning, programming, and budgeting for manpower and training resources, including facilities, to support assigned training requirements.

5.3.6 Commander, Naval Air Force, U.S. Atlantic/Pacific Fleet (COMNAVAIRLANT/PAC):

a. Supervises, coordinates, and directs internal aviation technical and management training programs for all activities.

b. Coordinates maintenance training, maintenance administration courses, and factory training under the auspices of NAVAIRSYSCOM.

c. Exercises quota control authority of all training under his cognizance.

d. Conducts reviews of new or revised training curricula.

e. Establishes, coordinates, and directs administration of the Maintenance Training Improvement Program (MTIP) within activities under their cognizance.

f. Directs the Fleet Aviation Specialized Operational Training Group (FASOTRAGRU) and exercises quota control of all

maintenance administration and management courses provided by FASOTRAGRULANT/PAC.

g. Provides on-site training and management assistance to all carriers through the ALRE Maintenance Management Teams.

5.3.7 The Naval Safety Center (NAVSAFECEN) provides technical assistance through reviews of training equipment, curricula, and training devices for safety related issues where inadequate training could result in excessive risk to personnel and equipment.

5.4 General Maintenance Training

5.4.1 This section defines the levels of training for ALRE personnel. It covers the required training for specific job requirements on ALRE systems and associated equipment.

5.4.2 Training is a continuing effort that begins with an individual's entry into service and continues through various courses, with his/her eventual assignment to a particular job. The technical knowledge and skills required to perform in the assigned job determine course requirements.

5.4.3 Training is accomplished in a sequential process with basic courses providing prerequisites for following courses. Most aviation personnel receive initial training en route to their first duty station. Those who do not attend Class-A school receive airman apprentice training following completion of recruit training and report directly to their ultimate duty station.

5.4.4 Formal training for ALRE personnel consists of A school at Naval Air Technical Training Center (NATTC) Pensacola and C school at NATTC DET Lakehurst, NJ. Most personnel undergoing ALRE training will follow a standard training path, with revisions and exceptions met on an as required basis. Recruit personnel enroute to a fleet billet will normally attend a class A school. Fleet personnel will normally attend specialized training in a class C course.

5.4.5 Navy Enlisted Classifications (NECs)

5.4.5.1 NECs supplement the enlisted rating structure by identifying personnel and billets in manpower authorizations. NEC codes reflect special knowledge and skills that identify personnel and requirements when the rating structure is insufficient by itself for manpower management purposes.

5.4.5.2 Personnel may earn five NECs that are maintained in the Enlisted Master Record for detailing and distribution purposes.

The Primary (PNEC) and Secondary (SNEC) NECs are reflected on the Enlisted Distribution Verification Report (EDVR) at local commands.

5.4.5.3 Successful completion of C school is mandatory for the assignment of ALRE NECs. NECs will be automatically awarded to ensure faster assignment and reduce paper work at the command level.

5.4.5.4 Commanding officers may recommend cancellation of an NEC assignment when personnel do not qualify or perform their NEC duties satisfactorily, normally within 6 months after reporting aboard. Full details are defined in the Navy Enlisted Manpower and Personnel Classifications and Occupational Standards, NAVPERS 18068 Series, the NEC Manual.

5.5 Navy Training Schools

5.5.1 CNET conducts training for officers and enlisted personnel in basic, technical, and specialized areas as described below:

a. Class A - Provides the basic technical knowledge and skills required to prepare an individual for entry level performance and additional specialized training. It includes apprenticeship training.

b. Class C - Provides the advanced knowledge, skills, and techniques necessary to perform a particular job in an assigned billet. An NEC may be awarded to identify the skill achieved.

c. Class F - Provides team training to fleet personnel, officer and enlisted, en route to duty as members of ship's company. It also provides individual refresher, operator, maintenance, and technical training to meet fleet or TYCOM needs.

5.5.2 The Naval Air Technical Training Center (NATTC) provides training for officers and enlisted personnel in the operation, maintenance, and repair of ALRE systems and associated equipment using maintenance trainers. Trainers are instructional units that provide training support for a system, specific equipment, groups of related equipment, or specialized techniques.

5.5.3 The Naval Air Maintenance Training Group Detachments (NAMTRAGRUDETs) (Norfolk and San Diego) train fleet personnel in courses covering operation and maintenance of specific equipment and systems and in ALRE administration and management. They provide formal training for fleet personnel with the following courses:

a. ALRE Operation and Maintenance for Catapult Refresher

(C-604-2016)

b. ALRE Operation and Maintenance for Catapult Basic (C-604-2024)

c. ALRE Shipboard Arresting Gear (C-604-2025)

d. ALRE Quality Assurance Administration (C-670-2017)

5.5.4 The Fleet Training Centers (FTCs) of Commander, Naval Education and Training Command (CNET), provide numerous courses in a wide variety of subjects. Course listing and quota control information are listed in the Catalog of Navy Training Courses (CANTRAC), NAVEDTRA 10500.

5.5.5 Shipyard technical training for fleet personnel consists of regularly scheduled courses that are convened periodically at naval shipyards and cover a wide range of technical areas. Courses not regularly scheduled may be arranged through the TYCOM, if sufficient requirements exist. Courses are normally in the hull, mechanical and electrical (HM&E) areas and include various types of welding, gas detection, insulation/lagging, brazing, boat repair, degaussing, rigging, fire watch, wire rope construction, and other similar industrial disciplines.

5.5.6 The Aviation Training Support System (ATSS) is a computerized system used to facilitate management of the training program. ATSS provides student scheduling for various courses, generates student reports, performs diagnostic testing and grading, and maintains individual and unit statistical data.

5.6 ALRE Maintenance Officer Training

5.6.1 ALRE maintenance officers shall attend, and successfully complete, the ALRE maintenance officer course prior to reporting for duty. The course provides the essential prerequisites for initial assignment to an ALRE maintenance officer billet. Topics include basic qualifications in management principles and techniques, ALRE systems and equipment, supply fundamentals, maintenance and material control procedures, quality assurance requirements, the Planned Maintenance System (PMS), launch and recovery bulletins and technical directives, data collection requirements, and the fundamental elements of the Aircraft Launch and Recovery Equipment Maintenance Program (ALREMP).

5.7 In service Training

5.7.1 In service training is a command responsibility. Since this training represents a major contribution to the Navy's overall efforts, a systematic in-service training program shall be

conducted. Both lectures and practical training are integral parts of a successful program and must be coordinated to satisfy each individual activity's particular requirements.

5.7.2 Formal In service training is conducted through lectures, supplemented with visual aids and required reading. A schedule of training is prepared and published by the division officer listing each lecture, time, location, attendees, subjects, and instructors.

5.7.2.1 Branch officers prepare a training syllabus for their personnel and maintain progress records for them. They also furnish the division officer with the names of the personnel to be scheduled for training lectures.

5.7.2.2 Lectures may also be prepared by designated officers and petty officers. Instructors are usually detailed from the V-2 division and are responsible for presentations and the report of student progress.

5.7.3 On-the-Job-Training (OJT) is informal training and consists of practical instruction of personnel in the performance of maintenance tasks, by demonstration and simulation, under the supervision of designated personnel. The experienced personnel of the activity are used to instruct, demonstrate, and impart their skills to less experienced personnel. No special equipment is required, only the job and normal tools to do it. The striker or trainee learns by seeing the job done and gains experience by participating in the work. The nature of this type of training makes regular scheduling impractical. This practical training is performed at every opportunity and can be monitored by effective use of a training syllabus. The syllabus prepared for this type of training is commensurate with the skills of rated and striker personnel. OJT is documented on the Training Syllabus form (OPNAV 4790/33).

5.7.3.1 A report of practical training accomplished is made to the division officer at regular intervals, and final attainment of satisfactory levels of skill is recorded in appropriate records. These records will indicate required training in special areas, documentation of OJT completed, as well as certify qualifications for individual advancement in rate.

5.7.4 The Personnel Qualification Standards (PQS) Program is a compilation of written requirements for a specific watch station or unit team member. PQS is in the format of a specification guide and contains questions pertaining to a specific task. Further detailed information regarding PQS procedures can be found in NAVEDTRA 43100-1 Series, NAVEDTRA 43100-2 Handbooks, and OPNAVINST 3500.34E.

5.7.5 Required reading consisting of certain directives and publications, as directed by the division officer, are routed for dissemination as maintenance information. The material should be incorporated in the active required reading file for each branch or work center. The active file contains temporary maintenance information and such other information as the division officer may direct. The standing file will contain material of a continuing nature that has been read and initialed by all personnel presently assigned, but which is kept on file for the indoctrination of new personnel. The Required Reading and Maintenance Information Record (OPNAV 4790/34) (figure 8-2) is used to maintain a record on the progress of each person. When a required reading document is not itself contained in the reading file, a cross-reference sheet giving the document's location is filed in its place. Files are reviewed at least once monthly by the V-2 division officer and obsolete material removed.

5.8 The Maintenance Training Improvement Program (MTIP)

5.8.1 MTIP is a training management system, which through diagnostic testing procedures, identifies training deficiencies in maintenance personnel. The program is compatible with and supports traditional technical training programs in naval aviation. Through individual evaluation of technical knowledge levels, a quantitative assessment can be made of existing training courses and material. Such assessments allow for corrective action to enhance technical knowledge levels and to improve existing training courses.

5.8.2 The Director, Air Warfare Division (N78), as program sponsor, shall provide overall program direction. The following policies are applicable:

a. MTIP shall be implemented throughout naval aviation.

b. Program support will be provided through a computerized management/operating system.

c. Standardized program procedures will be developed and coordinated with the TYCOMs to the maximum extent consistent with organizational requirements and capabilities.

d. Final skill qualification remains with the activity. Minimum skill certification requirements will be established by the appropriate unit commander to meet safety requirements.

e. The MTIP primary goals are to raise technical knowledge levels and to improve existing formal training.

5.8.3 MTIP Responsibilities

5.8.3.1 The Director, Air Warfare Division (N78):

a. Establishes policy for, and exercises overall control of the MTIP.

b. Programs aviation training resource requirements.

c. Identifies and plans manpower requirements.

5.8.3.2 COMNAVAIRSYSCOM, through the Air Programs Coordinating Office, Aviation Training Systems (PMA205):

a. Provides program support as required.

b. Assists in development, implementation, and support of program software requirements and training materials.

c. Provides technical assistance, advice, and liaison as required.

5.8.3.3 The aviation TYCOMs shall:

a. Issue implementing directives, provide program guidance, and ensure adequate planning and implementation of necessary actions to support MTIP.

b. Provide required coordination and support to meet program requirements.

c. Establish and assign subordinate responsibilities to ensure clear definition of lower echelon requirements.

d. Standardize and coordinate program parameters, report requirements, and data utilization.

e. Maintain liaison for planning, development, maintenance, and validation of MTIP materials.

f. Ensure that training support materials for deploying units are available, as required.

g. Monitor formal training programs within each weapon system community.

h. Measure program effectiveness of formal training courses to provide full support of the Maintenance Training Requirements Review (MTRR) process.

5.9 ALRE Maintenance Management Teams

5.9.1 The TYCOM ALRE Maintenance Management Teams are available to advise, train, and assist fleet activities with aircraft launch and recovery equipment maintenance procedures, logistics support problems, and personnel utilization. Detailed information on concepts, responsibilities, and procedures are found in Chapter 6.

5.10 Maintenance Training Requirements Review (MTRR)

5.10.1 The MTRR is a CNO-sponsored review of designated weapon systems training courses, to ensure the fleet has the best trained maintenance personnel. The MTRR:

a. Identifies deficiencies in current training tracks, courses, curriculum content, and NECs.

b. Resolves problems that have previously been identified.

c. Programs corrective action.

d. Establishes a tailored training track for enlisted aviation billets, where applicable.

e. Provides a communications bridge for community participants to generate an interchange of ideas.

5.10.2 The MTRR process, which also applies to ALRE training, ensures compliance with CNO policy and development of structured training tracks to promote standardization between fleets per the following basic guidelines:

a. Formal training shall be limited to subject matter taught most effectively and economically in a classroom setting.

b. OJT will be used to reinforce classroom training, where feasible.

c. Formal structured training shall provide the knowledge and skill required of specific tasks which the trainee will be required to perform.

5.10.3 The MTRR consolidates all elements of the training process. Commands represented on the policy committee include CNO, CNET, COMNAVAIRLANT, and COMNAVAIRPAC. Advisory committee membership includes Bureau of Naval Personnel (BUPERS), NAVAIRSYSCOM, and

others as appropriate. Policy and advisory committees primarily are concerned with maintenance and training policy. Working committees comprise fleet subject matter experts (SMEs) who must be familiar with the technical aspects of the weapon system to be reviewed. SMEs must also be aware of current maintenance problems and their relationship to the training process.

5.10.4 When an MTRR conference is announced, affected TYCOMs should schedule and conduct a preliminary conference. The preliminary conference indoctrinates participants in review, scope, objectives, procedures and reports. Information concerning training tracks and applicable courses will be provided. Participants in the preliminary conference will be required to attend the CNO conference and are to be selected accordingly.

5.10.4.1 Participants will normally perform the following at the CNO-sponsored conference:

a. Review existing training and modify as required.

b. Establish new training as required.

c. Recommend revisions, deletions, or development of new NECs.

d. Identify and describe new course requirements.

e. Identify problems relative to training deficiencies that impact on fleet readiness and make appropriate recommendations.

5.11 Organizational Responsibilities

5.11.1 The Commanding Officer is responsible for personnel training within his/her command. All local unit training will include appropriate elements of OPNAVINST 5100.8G, Navy Safety Precautions for Forces Afloat, 5100.19D NAVOSH for Forces Afloat and OPNAVINST 5100.23E, Navy Safety and Occupational Safety and Health Program.

5.11.2 The air officer is responsible for ensuring that training is accomplished for both permanently and temporarily assigned personnel and for ensuring adequate monitoring of appropriate personnel documents (EDVR, OPNAV 1000/2, etc.). The air officer will ensure that the MTIP is conducted per TYCOM directives.

5.11.3 V-2 division officers shall establish and carry out a suitable training program as directed by the air officer, monitor and coordinate the training of personnel assigned to the division, maintain appropriate records of completed training, and ensure adherence to OJT, PQS and MTIP.

The V-2 Division Officer is responsible for:

a. Directing and coordinating divisional and ALREMP training.

b. Obtaining quotas to support training requirements.

c. Overall management of required reading boards.

5.11.4 V-2 Division Officers will ensure the following ALREMP training is accomplished:

a.	QAI/CDQAI/CDI	30 minutes	Monthly
b.	Tool Control	30 minutes	Monthly
c.	Tag-out Procedures	30 minutes	Monthly
d.	MAF/VIDS Board Procedures	30 minutes	Quarterly
e.	FOD Program	30 minutes	Quarterly
f.	Tech Manual Use	30 minutes	Quarterly
g.	Tow Tractor/Forklift OPS	30 minutes	Quarterly
h.	METCAL Program	30 minutes	Semi-Annually
i.	Corrosion Control	30 minutes	Semi-Annually
j.	TPL Program	30 minutes	Semi-Annually

5.11.5 Group/work center supervisor responsibilities for the training program are as follows:

a. Ensure formal in-service training is conducted through lectures, supplemented with visual aids and required reading.

b. Ensure OJT is conducted by demonstration and simulation under supervision of designated work center personnel.

c. Ensure PQS and MTIP are administered in accordance with established procedures.

d. Maintain Active and Standing Required Reading Boards.

5.12 Training Publications

5.12.1 The Manual of Navy Enlisted Manpower and Personnel Classifications and Occupational Standards, NAVPERS 18068 (NOTAL), defines rates and ratings by describing the Navy's requirements and identifies additional skills required in specified billets which are supplemental to rating skill requirements. The manual consists of two sections as follows:

a. Section I - Contains occupational standards that express requirements for skills as determined by manpower management. These standards form the basis for personnel training and distribution.

b. Section II - Contains Navy Enlisted Classifications (NECs) which identify skills requiring more specific identification than is provided by rates and ratings and which are not rating-wide requirements.

5.12.2 Catalog of Navy Training Courses (CANTRAC). The CANTRAC (NAVEDTRA 10500), contains information on schools and courses offered through Chief of Naval Education and Training (CNET) and other Navy training commands.

5.12.2.1 Functions. The CANTRAC provides a consolidated and computerized catalog displaying courses available.

5.12.2.2 Organization. The CANTRAC is organized as follows:

a. Volume I – Introduction and General Information, and on training activities. Volume I list such information as seasonal uniform changes, quarters availability, and any other pertinent information relative to schools operated by the Navy.

b. Volume II - Catalog Course Descriptions and Convening Schedule. Volume II provides a listing of all courses arranged in numerical sequence by Course Identifying Number (CIN).

5.12.3 The List of Training Manuals and Correspondence Courses (NAVEDTRA 10061-AR Series) is a catalog of current training manuals and self-study courses, for both officer and enlisted personnel, in professional subjects. It is revised and distributed annually to all ships and stations.

5.13 Navy Integrated Training Resources and Administration System (NITRAS)

5.13.1 NITRAS is an automated system designed to be responsive to demands for training information from CNET and other high-level commands. Also, it provides direct supportive data for BUPERS. NITRAS files provide functional commanders and the training activities with an automated capability to manage and support the Navy training effort. CNET is responsible for management and operation of NITRAS, as noted in CNETINST 1510.1F (NOTAL).

5.14 Funding

5.14.1 En route training is funded by BUPERS. ALRE maintenance training that requires the expenditure of temporary additional duty (TAD) and travel funds must be requested in accordance with type/functional commander directives and the CANTRAC. Initial training is funded by COMNAVAIRSYSCOM. Follow-on training is funded by TYCOMs. TAD and travel costs may be funded by the TYCOMs or BUPERS with modification to TAD orders requested via the appropriate chain of command.

5.15 Manpower Management

5.15.1 The Manual of Navy Total Force Manpower Policies and Procedures (OPNAVINST 1000.16J) provides information, policies, tasking, and procedures for Navy manpower management. The manual is intended for use by all echelons in dealing with manpower change requests or other manning issues.

5.15.2 Manpower requirements for ships are developed through the Ship Manning Document (SMD) process, which identifies quantitative and qualitative manpower requirements for the ship.

5.15.3 Occupational standards define the tasks required of specified rates or ratings. They are the minimum standards required to function effectively at a given level of responsibility. They are the basis for enlisted training, advancement, distribution, and manpower requirements development.

5.15.4 The Manpower Authorization (OPNAV 1000/2) is the qualitative and quantitative document expressing military manpower requirements authorized by CNO for a naval activity. The OPNAV 1000/2 is used for:

a. Providing effective personnel distribution.

b. Planning manpower requirements for recruiting, training, promotion, distribution, and Naval Reserve recall.

c. Stating official organizational manning and billet authorizations approved by CNO.

5.15.5 The Activity Manpower Document (AMD) Change Request (NAVPERS 1000/3) contained in OPNAVINST 1000.16J is used to request changes to manpower authorization resulting from mission, tasking, or organizational changes. NAVPERS 1000/3 is submitted to the Fleet Commander in Chief (FLTCINC) for update into the Total Force Manpower Management Systems (TFMMS).

5.15.6 The Enlisted Distribution and Verification Report (EDVR) is a monthly statement of an activity's personnel account reflecting all individual assignments, including prospective gains, prospective losses, and an onboard rating/NEC summary.

5.15.7 Distribution Navy Enlisted Classifications (DNECs) are used to inform commands of which NECs are being distributed and how they are carried against the activities' manpower authorizations.

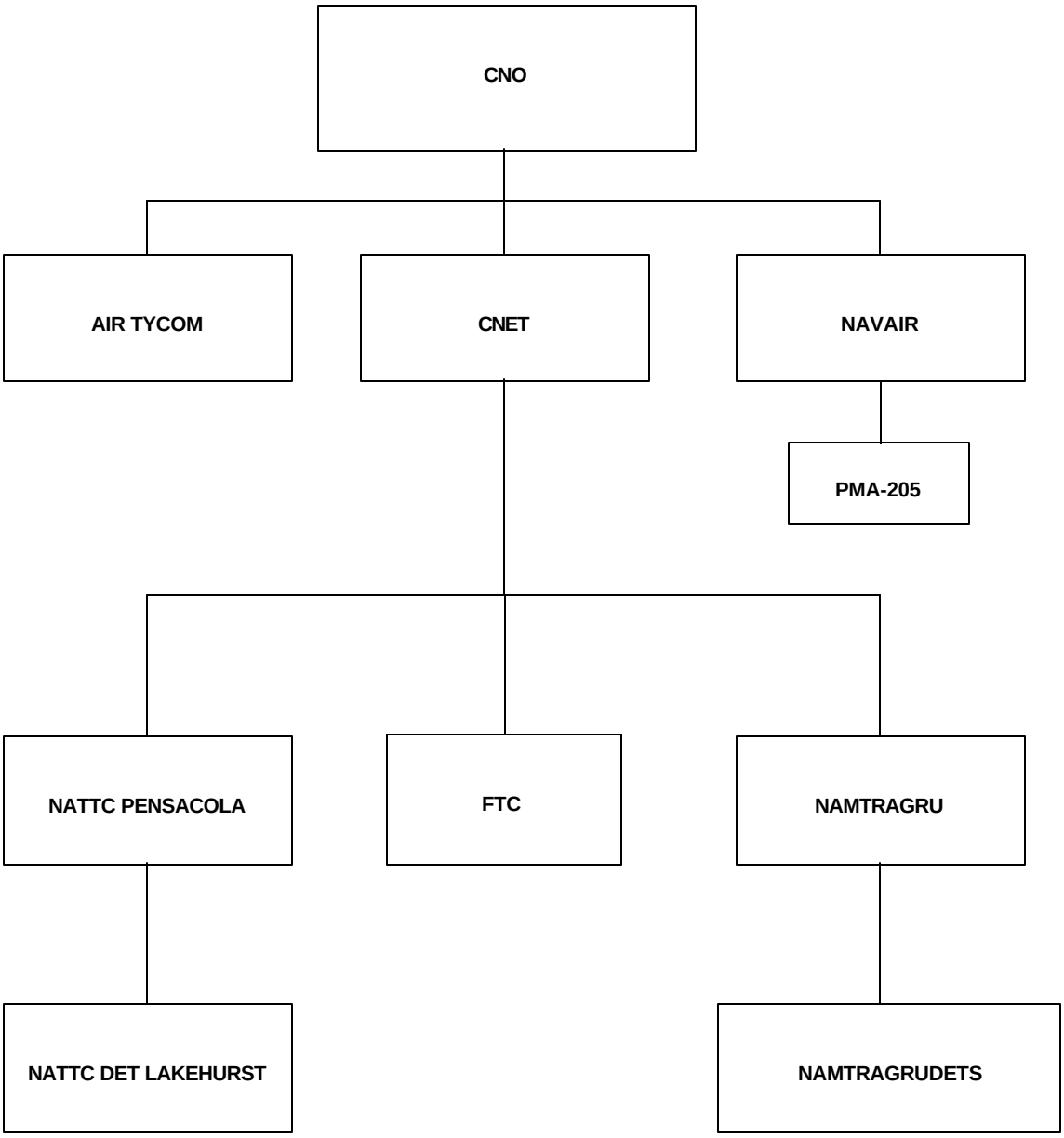

Figure 5-1. ALRE Training Organization

Chapter 6 - ALRE Maintenance Management Teams

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Chapter 6

ALRE Maintenance Management Teams

6.1 TYCOM ALRE Maintenance Management Team Composition

6.1.1 ALRE maintenance management teams shall be established by the air type commanders (TYCOMs) and COMNAVAIRSYSCOM (PMA 251F). These teams serve as the last link in the chain between the CNO program sponsor and the fleet carrier (CV/CVN)/shore establishments, ensuring that ALREMP policy and maintenance practices remain standard. The ALREMP management teams, at a minimum, will consist of one highly experienced ALREMP maintenance officer and one highly qualified ABCM/ABECS/ABEC capable of providing guidance in all facets of ALREMP. Two concepts of operation are used, assistance and audit.

6.2 Concept of Operations

6.2.1 ALRE maintenance management teams make assist visits to fleet CV/CVNs during the ship's work-up cycle and to ALRE shore activities annually. These visits will be informal and advisory in nature and should not disrupt normal operations and maintenance. The team will evaluate V-2 division's operation and maintenance procedures for adherence to current CNO, NAVAIRSYSCOM, NAVAIRWARCENACDIV Lakehurst, and all applicable TYCOM directives. Activities visited are encouraged to discuss their maintenance, material and personnel problems and to reveal other areas of concern where guidance may be beneficial. Critiques with the air officer, V-2 division/site officer, ALRE maintenance officer and other designated personnel are scheduled at mutually agreed upon times. If deemed necessary by auditors, higher levels of the chain of command may need to be de-briefed. Notes and recommendations for change and improvement are left with the visited activity for their own use.

6.2.2 ALRE maintenance management teams will conduct an audit of fleet carriers prior to deployment and to ALRE shore activities annually. The audit will evaluate the overall ALRE maintenance program and the activity's compliance with current CNO, NAVAIRSYSCOM, NAVAIRWARCENACDIV Lakehurst, and applicable TYCOM directives.

6.2.3 The commanding officer may request the services of the ALRE maintenance management teams whenever he/she deems it necessary.

6.3 Duties and Functions

6.3.1 ALRE Maintenance Management Teams advise, train and audit fleet carrier V-2 divisions and shore activities on aircraft

launching and recovery equipment maintenance procedures, including related administrative and logistics requirements. Specific functions include, but are not limited to:

a. Providing guidance in interpretation of ALREMP directives, detecting and assisting in resolving problems, and ensuring uniformity and standardization of policies and procedures in all fleet CV/CVNs.

b. Providing advice, training, and assistance in proper operation, maintenance of ship's installed ALRE.

c. Analyzing personnel use, including NEC assignment and utilization, divisional Enlisted Distribution and Verification Report (EDVR) management, and Ship's Manning Document (SMD) requirements for the V-2 division.

d. Advising, training, and assisting with maintenance training procedures, Personnel Qualifications Standards (PQS), and the Maintenance Training Improvement Program (MTIP).

e. Providing informal liaison between the fleet unit and the TYCOM staff.

f. Reviewing and advising management and supervisory personnel regarding compliance with all aspects of the quality assurance program.

g. Advising and assisting in proper maintenance and material control techniques, requisitioning procedures, and record keeping requirements.

h. Reviewing and recommending changes to ALREMP policy, procedures, instructions, and publications.

i. Upon completion of formal audits, forward a copy of all discrepancies and comments to COMNAVAIRSYSCOM (PMA251).

6.4 Scheduling

6.4.1 ALRE Maintenance Management Team visits will be scheduled by the TYCOM on a routine basis, with each ship visited at least once during the work-up cycle and/or during shipyard availabilities. Formal audit will normally be conducted for fleet carriers prior to deployment and to ALRE Shore activities annually. However, to evaluate overall ALREMP and Quality Assurance (QA) management procedures used, including compliance with current Chief of Naval Operations (CNO) and Type Commanders instructions, a formal audit will be conducted at least annually. The ALRE Management Team may

come aboard for unscheduled assist at the TYCOMs discretion or may be requested by the activity via naval letter or message whenever the command feels it is necessary.

6.4.2 ALRE maintenance management teams shall inform COMNAVAIRSYSCOM (PMA251) as early as possible, but no less than two weeks prior to the actual dates of all formal audits.

6.5 Evaluation Criteria

6.5.1 Assist visits are informal in nature and results should be provided to the command at the conclusion of the visit by informal means. If major discrepancies are observed during the assist visit, the chain of command will be notified immediately by the ALRE Maintenance Management Team and a formal letter to the ship's Commanding Officer will be required.

6.5.2 Formal audits will require a formal report, listing all discrepancies, and a summary statement will be forwarded to the Commanding Officer within 30 days of audit completion. A copy of the report will also be forwarded to COMNAVAIRSYSCOM (PMA 251F2).

6.5.3 A report of corrective action taken will be submitted to the Type Commander within 30 days of the receipt of the formal audit results. Each discrepancy listed in the report will be addressed individually to correspond with item/paragraph. Major discrepancies must be corrected within 30 days. Updates will be submitted every 60 days until all discrepancies are corrected.

6.5.4 Major discrepancies identified that are safety related will require a grade of unsatisfactory during the audit and must be reevaluated as soon as the ship has taken corrective action.

NOTE

A major discrepancy is any deficiencies which, if not corrected, could result in death or injury to personnel, or damage to or loss of aircraft, equipment, or facilities.

Chapter 7 - Special Programs

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Chapter 7

Special Programs

7.1 Foreign Objective Damage (FOD) Prevention

7.1.1 Cleanliness of catapult and arresting gear equipment and machinery areas and the prevention of damage through loose or foreign objects is essential to safe operations. Foreign object damage to ALRE can be catastrophic to the equipment and could lead to the destruction of aircraft and serious injury to personnel. A continuing successful program to combat FOD (including fluid spills) requires active all hands participation.

7.1.2 An effective FOD prevention program that identifies, corrects, and eliminates causal factors is a command responsibility. A successful program depends on command support, knowledgeable and aware personnel, and a high degree of integration into the overall maintenance effort. Each carrier shall develop and implement a strong FOD prevention program, issue specific directives on internal control, and ensure verification of program compliance for all ALRE systems. The V-2 Division Officer is assigned ALRE FOD prevention responsibilities.

7.2 Metrology and Calibration (METCAL)

7.2.1 The METCAL program, established by SECNAVINST 3960.6 (NOTAL), provides for calibration and repair facilities to ensure optimum performance of precision measuring equipment (PME). COMNAVSEASYSCOM has overall management control for the Navy's METCAL program which is defined by NAVSEAINST 4734.1A (NOTAL). ALRE PME is also governed by the provisions set forth in NAVAIRINST 13640.1A (NOTAL). Activities will use the nearest supporting IMA for calibration support, as specified in appropriate directives.

7.3 Aircraft Launch and Recovery Equipment (ALRE) Discrepancy Reporting Program

7.3.1 The ALRE Discrepancy Reporting Program is the method by which hazardous situations, material/publications deficiencies, and improper quality assurance procedures are reported. It includes the ALRE Quality Deficiency Report (QDR), ALRE Hazardous Material Report (HMR), ALRE Engineering Investigation (EI) request, and the ALRE Technical Publication Deficiency Report (TPDR). This program is discussed in detail in Chapter 11.

7.4 Tool Control

7.4.1 The Tool Control Program (TCP) provides a means to rapidly account for all tools following completion of a maintenance task,

thus reducing the potential for FOD. Responsibilities for compliance with this program are in paragraph 12.5.

7.5 Corrosion Prevention and Control

7.5.1 To prevent mishaps, excessive out-of-service time, serious damage to aircraft and equipment, and a resultant reduction in readiness with increased costs, corrosion must be prevented or corrected at all levels of maintenance. Responsibilities for corrosion prevention and control, and documentation procedures are outlined in NAVAIRSYSCOM, NAVSEASYSCOM and other supporting directives. Under Organizational Maintenance Management Systems (OMMS NG), corrosion control documentation is mandatory. For additional information, see Appendix C for corrosion codes that must be entered on the ALRE MAF, OPNAV 4790/160.

7.6 Non-destructive Inspection (NDI)

7.6.1 NDI is the practice of evaluating a part or sample of material without impairing its usefulness. Program requirements are defined in NAVAIRINST 13070.1B (NOTAL). NDI support for ALRE maintenance is a function of intermediate maintenance activities and is routinely obtained from AIMDs and SIMAs.

7.7 Configuration Management

7.7.1 COMNAVAIRSYSCOM has management responsibility for controlling and tracking modifications to aeronautical equipment using the technical directive (TD) system.

7.7.1.1 Configuration management applies technical and administrative direction and surveillance to (1) identify and document the physical and functional characteristics of an item, (2) control changes to any of those characteristics, and (3) record and report change processing and implementation status. Changes in equipment or the characteristics of the equipment must be documented and reported. Proper accounting of configuration changes helps ensure effective supply, maintenance, and other logistics support (i.e., current COSALs, technical manuals, and PMS coverage).

7.7.1.2 Technical documents approving specifications establish a baseline for systems, subsystems, and equipment. Any changes, modifications, or replacement of the initial equipment is a deviation from the baseline and must be reported. Baselines, plus approved changes to those baselines, make up the current configuration of a piece of equipment or system.

7.7.2 COMNAVAIRSYSCOM, as ALRE Program Manager, retains configuration management responsibility and authority for ALRE.

NAVAIRWARCENACDIV Lakehurst, the cognizant field activity (CFA) for ALRE, prior to issuing a TD, must ensure that supply support is available, that affected documentation is updated, and that all impacted integrated logistics support (ILS) elements are adequately addressed. Current configuration status is maintained by the TYCOMs for the equipment under their cognizance. COMNAVAIRSYSCOM is responsible for ensuring that all elements (material, funding, technical manuals, training, and facilities, etc.) affected by a change proposal are adequately addressed, provided for, and approved by the Configuration Change Control Board per NAVAIRINST 4130.1C (NOTAL). NAVAIRSYSCOM also coordinates with the ALRE supply support organizations to ensure adequate spares and material support are available in the supply system.

7.7.3 NAVAIRSYSCOM TDs are issued for different systems and equipment, generally in the form of changes and bulletins. Some of these include Ship Installed and Expeditionary Airfield Launch, Recovery, and Visual Landing Aids Changes/Bulletins (LRCs/LRBs), and numerous others. COMNAVAIRSYSCOM policy and requirements for the TD program are outlined in NAVAIRINST 4130.1C (NOTAL), the NAVAIR Configuration Management Manual, and NAVAIRINST 5215.12 (NOTAL), the NAVAIR Technical Directives System.

7.7.3.1 NAVAIRWARCENACDIV Lakehurst TDs are in the form of NAVAIR service changes, bulletins, and repair procedures which direct the modification, repair, or inspection of specific equipment or systems, as detailed by NAVAIRINST 5215.10D (NOTAL). These directives provide detailed information for accomplishment and documentation of the action. Completion of the action (modification/inspection/repair) is recorded on the Configuration Service Change Form No.1511, which is provided as an enclosure to the change or bulletin. Annually, NAVAIRSYSCOM issues a Zero Bulletin that provides an index and current status of changes, bulletins, and repair procedures. Action accomplishment is documented on Form No.1511, and on OPNAV 4790/CK, Ship's Configuration Change Form to be submitted as required by OPNAVINST 4790.4C. The Form No.1511 is forwarded to NAVAIRWARCENACDIV Lakehurst, with copies to the TYCOM, NAVICP Philadelphia and NAVICP Mechanicsburg. The activity shall also take appropriate action to ensure ship's plans are modified to reflect the installed change, as necessary.

7.7.3.2 Completion of an OPNAV 4790/CK, Ship's Configuration Change Form (CCF), reports configuration status to the Weapon System File (WSF) at NAVICP Mechanicsburg. This file is the basis for supply and maintenance support for the reflected configuration status of fleet carriers. OPNAV4790/CK Form documents a configuration change resulting from:

a. Addition or installation of any new equipment.

b. Deletion, removal, turn-in of any installed equipment.

c. Replacement or exchange of any equipment (requires two documents, one for removal and one for replacement).

d. Modification of any installed or in-use equipment.

e. Relocation of any equipment to a new deck, new frame, or new compartment.

f. Accomplishment of any alteration directive; i.e., Field Change, Service Change, Ship Alteration (SHIPALT).

g. Correction of incorrect or deficient data in basic configuration records.

7.8 Installed/Discrepant Parts List (I/DPL)

7.8.1 The ALRE I/DPL Program is an automated computer program that will identify ALRE components and parts that have been determined to be discrepant. The program contains two separate databases, one listing discrepant parts, and one to locally document parts installed in shipboard ALRE equipment and systems. The program will identify discrepant parts prior to their installation and, after being updated, it will identify previously installed parts that have since been identified as being discrepant.

7.8.1.1 The Installed Parts List (IPL) contains a running account of parts installed in ALRE equipment and systems. The IPL shall be initiated, maintained, and updated by adding new items as they are installed or by updating currently installed parts when they are replaced.

7.8.1.2 The Discrepant Parts List (DPL) is used to identify parts that are discrepant prior to installation in ALRE equipment or systems. The DPL contains an up-to-date listing of all known discrepant parts that could be issued from the supply system for use by maintenance personnel. The program can also be used, after receipt of a disk with updated discrepant parts information, to determine if there are discrepant parts currently installed in ALRE equipment or systems. NAVAIRWARCENACDIV, Fleet Liaison, Code 4.8.10.5, Lakehurst NJ maintains the Discrepant Parts database. They will furnish updates to each command utilizing this program on a monthly basis.

7.8.2 Ships and applicable shore activities will submit an updated shipboard installed parts file no later than the 5th day of each

month. Submission of I/DPL inputs should be made via e-mail to NAVAIRWARCENADLKE Fleet Liaison Code 4.8.10.5 when available. When e-mail is not available disk shall be sent to:

NAVAL AIR WARFARE CENTER AIRCRAFT DIVISION, LAKEHURST
BLDG. 596/1 ATTN: 4.8.10.5
HWY 547
LAKEHURST, NJ 08733-5090

To ensure disks are received in a timely fashion, NAVAIRWARCENACDIV Lakehurst Code 4.8.10.5 will notify Naval Air Systems Command PMA 251 and respective TYCOM's monthly of status of required reports.

7.8.3 Detailed instructions concerning the I/DPL Program are listed in NAWCADLKE-48J500-0007 Aircraft Launch and Recovery Equipment Installed/Discrepant Parts List Program Users Manual (Ship's) & Users Manual (Manager's).

7.9 Automated Shot and Recovery Log Program (ASRL)

7.9.1 The ALRE ASRL Program consists of two major subsystems - The ASRL Main System and the Log Entry System. The ASRL Main System is used to accumulate the log entry data from the remote work center PCs and provides an array of capabilities. The Log Entry System is designed to be installed on remote work center PCs to allow independent entry of steam catapult and pri-fly recovery data.

7.9.2 Steam Catapult Log

7.9.2.1 Catapult launching data shall be kept in a catapult rough shot log or directly loaded into a computer system running the ASRL Log Entry Program. Daily, the launching data will be transferred to the Automated Shot and Recovery Log Program (ASRL Main). Detailed instructions concerning the ASRL program are listed in NAWCADLKE-48J500-0009, Aircraft Launch and Recovery Equipment (ALRE) ADP Program Users Manual. ASRL collects all data that is also submitted on steam catapult log (NAVAIR 13820/1) forms, expands portions, and adds new elements. Specific changes are:

---Individual date/time
---Day/night column
---Ambient temperature for each entry
---Wind over deck (chart wind)
---Actual wind over deck
---Removal of clock time one data

7.9.2.2 ASRL Data shall be collected by all activities operating steam catapults for all launches, including no load and dead load. Extreme care shall be taken to provide complete and accurate

information. A clock, synchronized with ILARTS time, shall be installed in a location where it will be plainly visible from the console recorder's station during all launches.

7.9.2.3 Ships shall print out completed log sheets and review them for accuracy prior to creating a disk for NAVAIRWARCENACDIV Lakehurst. After any corrections are made, log sheets will be signed by a catapult officer, arranged in chronological order, and retained for a period of 1 year. The backup disk will serve as the ship's permanent record and will be retained with the life of the ship.

Note

Ensure that all disks are virus scanned prior to transferring data into the system or after data has been transferred to disk. Viruses can corrupt data and disable computers. Also, viruses may be passed between computers via disk. It is essential to check disks when they are received or prior to forwarding.

7.9.2.4 Ships shall submit ASRL reports no later than the 5th day of each month. Submission of ASRL reports should be made via e-mail to NAVAIRWARCENACDIV Fleet Liaison Code 4.8.10.5 when available. When e-mail is not available disk shall be sent to:

NAVAL AIR WARFARE CENTER AIRCRAFT DIVISION, LAKEHURST
ATTN: CODE 4.8.10.4
HWY 547
LAKEHURST, NJ 08733-5090

To ensure disks are received in a timely fashion, NAVAIRWARCENACDIV Lakehurst Code 4.8.10.5 will notify Naval Air Systems Command (PMA 251) and respective TYCOM's monthly of status of required reports.

7.9.3 Recovery/Wire Rope History Logs

7.9.3.1 Arresting gear data shall be kept in an arresting gear rough log or directly loaded into a computer running the ASRL Log Entry System. A clock, synchronized with ILARTS time, shall be installed in a location where it will be plainly visible from the Pri-Fly Operator's station during all recoveries. Daily, the recovery data will be transferred to the Automated Shot and Recovery Log Program (ASRL). Detailed instructions concerning the ASRL program are listed in NAWCADLKE-48J500-0009, Aircraft Launch and Recovery Equipment ADP Program Users Manual. ASRL collects all data formerly submitted on Pri-Fly Recovery Log (NAVAIR 13810/4) and Wire Rope History (NAVAIR13810/5), expands portions, and adds new elements. Specific changes are:

Pri-Fly Recovery Log

---Eliminated the “mail to” block
---Added Day/Night column
---Enter a single “f” for “free flight”
---Added a signature and date block

Wire Rope History
---Eliminated the ship’s identification number
---Eliminated the “mail to” block
---Reduced the number of notes from 5 to 3
---Added, OR, “Operational Requirements” in the notes
---Added a signature and date block

7.9.3.2 Ships shall print out completed log sheets of both Pri-Fly Recovery Logs and Wire Rope History and review them for accuracy prior to creating a disk for NAVAIRWARCENACDIV Lakehurst. After any corrections are made, log sheets will be signed by the Arresting Gear Officer, arranged in chronological order, and retained for a period of 1 year. The backup disk will serve as the ship’s permanent record and will be retained with the life of the ship.

Note

In order to accomplish the above with any degree of accuracy and confidence, ships will submit completed ASRL disks no later than the 5th day of each month to:

NAVAL AIR WARFARE CENTER AIRCRAFT DIVISION, LAKEHURST
HWY 547
ATTN: CODE 4.8.10.4
LAKEHURST, NJ 08733-5090

Note

Ensure that all disks are virus scanned prior to transferring data into the system or after data has been transferred to disk. Viruses can corrupt data and disable computers. Also, viruses may be passed between computers via disk. It is essential to check disks when they are received or prior to forwarding.

To ensure disks are received in a timely fashion, NAVAIRWARCENACDIV Lakehurst Code 4.8.10.5 will notify Naval Air Systems Command PMA 251 and respective TYCOM’s of status of required reports.

7.9.4 Flight Deck Operations Report (Part I Launching and Part II Landing). These reports shall be submitted quarterly by the Commanding Officer of all active aircraft carriers. This report shall be submitted, in paper format, via the main ALRE ASRL system, no later than the 15th day of each month following the end of each quarter to:

NAVAL AIR WARFARE CENTER AIRCRAFT DIVISION, LAKEHURST
HWY 547
ATTN: CODE 4.8.10.4
LAKEHURST, NJ 08733-5090

Chapter 8 - Maintenance Organization and Responsibilities

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Chapter 8

Maintenance Organization and Responsibilities

8.1 Concept.

8.1.1 Aircraft Launch and Recovery Equipment (ALRE) includes catapults, arresting gear and visual landing aids (VLAs). Since ALRE is utilized by high performance aircraft, safety must always be paramount to the personnel who operate and maintain this equipment. A properly implemented maintenance program will improve safety, maintenance integrity, effectiveness, performance, training of personnel, management, and evaluation of maintenance performed. The Aircraft Launch and Recovery Equipment Maintenance Program (ALREMP) is designed to maximize the effective utilization of manpower and material to accomplish this goal.

8.2 Organization.

8.2.1 This program provides standard ALRE maintenance organization structures and procedures that will promote uniformity among carriers in the method of utilizing maintenance personnel, materials, and facilities. Figure 8-1 depicts the ALRE maintenance organization. Maintenance Control (M/C), Quality Assurance (QA), and Maintenance Support (MS) work centers (W/C's) are essential elements in the V-2 division organizations. To enable the program to run smoothly, certain controls and procedures have been formulated in the specific areas of maintenance control and administration; forms, records and reports; quality assurance procedures; and in methods of performing maintenance. These procedures will aid in the establishment of good management practices and prevention of maintenance defects, and will enhance the ability of shipboard maintenance units to cope with the technical complexities of the ALRE they maintain.

8.3 Responsibilities

8.3.1 Commanding officer and department head. The ultimate responsibility for ALRE readiness rests with the commanding officer of the carrier in which it is installed. Included in this responsibility is direct overall responsibility for ship's manning, training, and systems upkeep. Responsibility for specific areas of ship's operation is delegated to department heads; for ALRE this is the air officer.

8.3.2 Catapult and Arresting Gear Officer. The air officer in turn delegates to the catapult and arresting gear (V-2 division) officer the specific responsibility for the operation and administration of the ship's ALRE and of all personnel and programs affecting V-2 division.

8.3.3 ALRE Branch Officers. ALRE branch officers are responsible to the V-2 division officer and are charged with the supervision of their respective work centers, for personnel performance and productivity, the material condition of equipment and facilities, and for proper operation of all equipment under their cognizance. Branch officers will assist the V-2 division officer and the ALRE maintenance officer in ensuring that the ALREMP program is properly administered within their work centers.

8.3.4 ALRE Maintenance Officer. The ALRE maintenance officer is responsible to the catapult and arresting gear officer for conducting ALRE maintenance and upkeep. His/her duties include control of all maintenance evolutions and specifically the following:

a. Upkeep maintenance normally performed on a day-to-day basis to include:

(l) Scheduled and unscheduled maintenance including on-equipment repair, and removal/replacement of defective parts and components.

(2) Incorporation of Technical Directives (TDs) (Service Changes (SC), Interim Rapid Action Changes (IRACs), Rapid Action Changes (RACs), Service Bulletins, and repair procedures).

(3) Documentation of maintenance actions.

b. Administration of the Maintenance Data System (MDS) includes reporting of configuration changes and logistics support.

c. Maintenance of an active quality assurance (QA) program to include the following:

(1) Ensuring that all critical areas of each maintenance action are inspected.

(2) Ensuring that qualified QA inspectors are available for all maintenance and support areas, to include quality assurance inspectors (QAIs)/collateral duty quality assurance inspectors (CDQAIs) and work center (W/C) collateral duty inspectors (CDIs).

(3) Operating and maintaining an ALRE Technical Publications Library (TPL) to support all equipment and maintenance required in the division, and ensuring that all changes and revisions are entered in each publication as required.

d. Performing upkeep maintenance consisting of off-equipment repair or replacement of damaged or unserviceable parts, components, or assemblies; and performance of PMS inspections on ALRE.

e. Ensuring liaison with, and coordination and documentation of maintenance required from, SIMAs, VRTs, NAVSHIPYDs, CAFSUs, TYCOMs; ship's maintenance manager; and local maintenance support such as from the AIMD or ship's engineering department.

f. Performing the maintenance control functions outlined herein.

g. Planning and submitting of budget requests for funding tools, spare parts, and materials necessary for proper operation and maintenance of ALRE.

h. Maintaining operational target (OPTAR) expenditure logs/records.

i. Requisitioning parts and materials to support ALRE operations and maintenance.

j. Establishing and maintaining an effective tool control program.

8.3.5 ALRE Maintenance Control Supervisor. The ALRE maintenance control supervisor is responsible to the ALRE maintenance officer for maintenance and upkeep. Duties include:

a. Coordinating daily maintenance activities for all ALRE maintenance production activities.

b. Supervising scheduled and unscheduled maintenance actions.

c. Maintaining and updating the maintenance control Visual Information Display System (VIDS) board for all ALRE maintenance actions.

d. Maintaining and updating maintenance requirements status boards.

e. Witnessing immediate maintenance actions as detailed in para. 9.10.1.b.

8.3.6 Group Supervisors (normally chief petty officers) . Group supervisors usually manage more than one work center (i.e., bow

catapults, waist catapults, arresting gear (A/G), visual landing aids (VLAs)) and are responsible for maintenance of all systems and equipment assigned to those work centers. Through the work center supervisors, group supervisors direct and manage an effective maintenance program, supervise day-to-day ALRE operations, ensure proper documentation of preventive and corrective maintenance, maintain effective communications between W/Cs and maintenance control, and require compliance with established ALRE support procedures.

8.3.7 Work Center Supervisors (including the QA supervisor and MS chief petty officer). Work center supervisors are the key to successful accomplishment of assigned tasks. Each is responsible for maintenance of his/her assigned ALRE systems. This requires constant communication between the work center and MC concerning equipment status, availability of manpower, and other factors which affect the capability to maintain the assigned equipment. The work center supervisor shall direct his or her personnel during daily operations and shall:

a. Keep the group supervisors apprised of all problems and equipment status within his/her W/C.

b. Keep the W/C VIDS status board up-to-date and validated with maintenance control.

c. Ensure that all maintenance documentation is complete and accurate. The supervisor's signature on the maintenance document signifies that all required maintenance actions have been completed, tool accountability has been maintained, documentation is correct, and QA inspections have been performed.

d. Be knowledgeable of procedures for ordering repair parts and ensure that all work center personnel are capable of ordering required parts from initial identification through material receipt.

e. Be knowledgeable of operating space item (OSI) operations. (Although stocking of OSIs is a supply department function, the inputs for stocking originate with the work center.)

f. Maintain strict tool control accountability within the work center. Ensure that all personnel comply with established tool control procedures.

g. Recommend to branch officers, via the group supervisors, qualified and responsible personnel to be collateral duty inspectors for the work center. Ensure that quality assurance inspectors (QAIs), collateral duty quality assurance inspectors

(CDQAIs) or collateral duty inspectors (CDIs) are available for all tasks requiring quality assurance inspection.

h. Identify operations requiring certified operators; ensure steps are taken to qualify and certify necessary personnel.

i. Assist the QA work center in implementing and maintaining support for the division safety program by:

(1) Disseminating appropriate safety posters and literature.

(2) Reporting all accidents and unsafe practices.

(3) Conducting safety training within the work center.

(4) Using and promoting practices which enhance safety while instilling proper regard for safety considerations in supervised personnel.

j. Assist the branch officers in maintaining the work center training program in order to:

(1) Ensure optimum use of personnel through job assignments based on their prior training and experience.

(2) Ensure formal in-service training is conducted through lectures supplemented with visual aids and required reading.

(3) Ensure on-the-job training (OJT) is conducted by demonstration and simulation under supervision of qualified work center personnel.

(4) Ensure PQS are administered in accordance with established procedures.

k. Maintain Required Reading files; Active and Standing. The Active file contains maintenance information of a temporary or a short-term nature such as messages, notices, or memos from the ALRE maintenance officer affecting a finite term period (i.e. a few days/weeks). The Standing file contains information of a long-term nature such as directives, instructions, or manuals that are applicable all the time or for extended periods (i.e. several months/years). Both files will be retained for reference for indoctrination of newly assigned personnel. Assigned personnel will read and initial both files subsequent to the addition of new instructions, directives, and other pertinent information. Files are updated monthly and reviewed by the division officer.

Figure 8-2 shows the standard Required Reading and Maintenance Information Record (OPNAV 4790/34).

l. Ensure that all publications required in the work center are available and maintained with current changes.

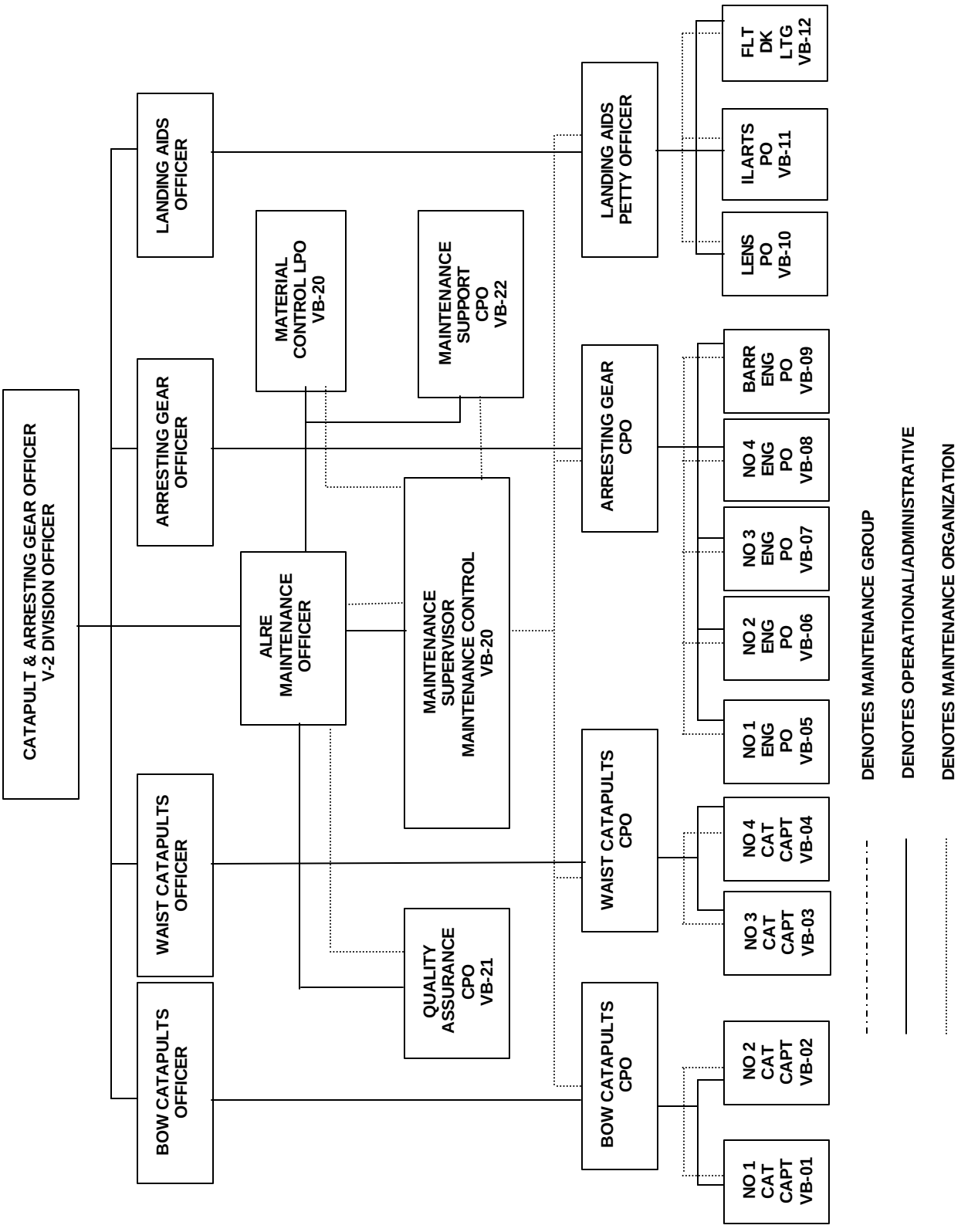

Figure 8-1. ALRE Maintenance Organization

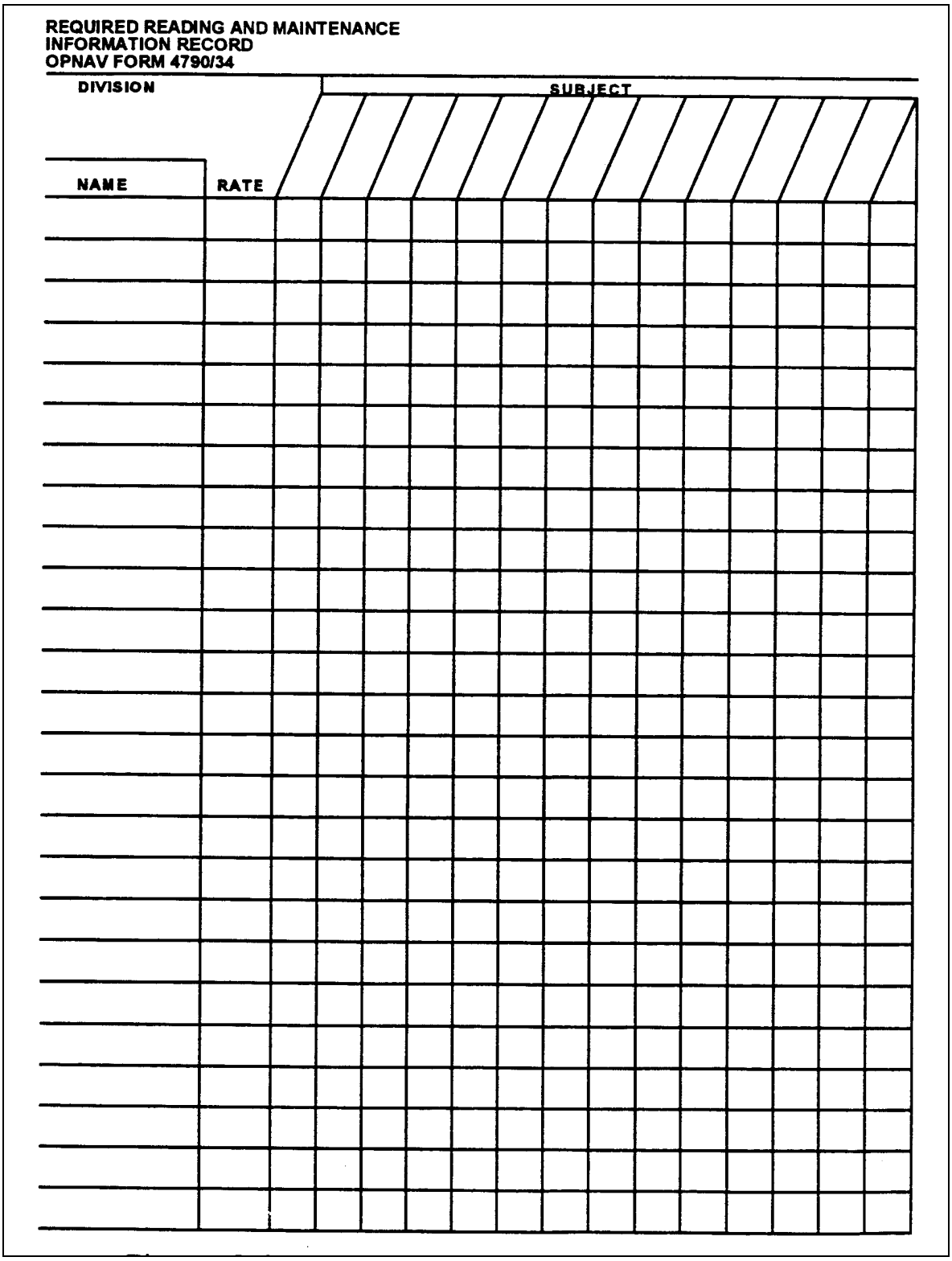

Figure 8-2. Required Reading and Maintenance Information Record (OPNAV 4790/34)

Chapter 9 - Maintenance Control

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Chapter 9

Maintenance Control

9.1 Maintenance Control.

The process of controlling maintenance requires information concerning equipment status, operational requirements, workload, and personnel assets available to perform the job. Efficient operation requires that all information concerning these areas pass through the maintenance control work center (W/C), hereafter to be called maintenance control (M/C). In order to accurately assess and determine proper courses of action, maintenance control must receive up-to-date information. In every situation, maintenance control remains the controlling agent, acting as event manager, for all maintenance actions.

9.1.1 The group and work center supervisors shall be responsible for the actual effort within their areas. They must keep maintenance control fully informed of any problems that can affect equipment operation and the maintenance process.

9.1.2 The ALRE maintenance officer will function as the maintenance control officer and shall be responsible for the overall management of the maintenance effort. This responsibility is exercised through the M/C supervisor. He/she shall direct the maintenance evolutions within the division.

9.1.3 Only the ALRE maintenance officer or the M/C supervisor shall have authority to certify that maintenance actions have been completed and that equipment can be returned to operational status. The maintenance control supervisor shall have this authority designated in writing by the commanding officer.

9.1.4 Clear communications between the work center and maintenance control are essential to successful operation of the maintenance program. Two-way voice communication, which is not overcome by inherent operational noise levels, must be available. Portable communication should be available between the ALRE maintenance officer and the work site. Back-up systems such as sound-powered phones, and similar equipment must be available as secondary means. Additionally, communications within the W/C operating areas must provide adequate and reliable information, as events occur, to ensure that operators are aware of on-going activities and/or emergency situations.

9.1.5 Effective maintenance control requires current information. The Visual Information Display System (VIDS) and maintenance requirement (MR) status boards are designed to provide optimum

status information required for control of maintenance. The VIDS and MR status boards are management tools that provide a graphic display of vital, up-to-date information on a continuing basis. Each change in job status will be reflected on the VIDS board. The board displays all job status information, particularly system problems or failures and supply status, and provides the ability to review the overall situation quickly. This system allows the ALRE maintenance officer, M/C supervisor, group and W/C supervisors to carry out their duties more effectively and efficiently.

9.2 Job Control Number (JCN)

9.2.1 The JCN for each maintenance task is composed of the cognizant work center designator (i.e., VB01) and the job sequence number (JSN). All outstanding maintenance actions for each work center, whether IN WORK, AWAITING MAINTENANCE, or AWAITING PARTS, will be posted on the M/C VIDS board (see figures 9-1 and 9-2). Figure 9-3 shows the work center VIDS board with systems/component identification in the equipment column (left hand side).

9.2.2 The JSN Log shall be maintained for each work center. The unit identification code (UIC) and work center code must be entered on each page of the log. A separate JSN for each maintenance action reported from each work center must be assigned. These JSNs shall be in sequential order. The W/C supervisor shall ensure that an identical JCN is assigned to the maintenance action and to any material requested.

9.3 Visual Information Display System (VIDS) Board

9.3.1 VIDS boards consist of enlarged cardex type pockets for the visual display of system status. Each pocket is overlapped by the one above so that approximately a 3/8" strip is visible at the bottom of the pockets. The strip provides basic job information including work center and equipment discrepancy. VIDS boards are available in three sizes: 100-pocket, 50-pocket, and 25-pocket.

9.3.2 The M/C VIDS board provides the current IN WORK, awaiting maintenance (AWM), and awaiting parts (AWP) status of all ship's force jobs. VIDS board configuration in the W/C's is similar to that in maintenance control. Outside maintenance activity (VRT, shipyard, SIMA, etc.) job status will be displayed on a separate VIDS board in M/C (only) and is described in paragraph 9.11.

9.3.3 The M/C VIDS board layout, shown in figure 9-1, includes:

a. VIDS board space is used to display work center designations. Identification of the W/C systems within the W/C maintenance areas, as depicted in figure 9-1 is optional.

b. Graduated space for displaying outstanding discrepancies in an in-work status. Column is entitled IN WORK.

c. Graduated space for displaying discrepancies that are in a deferred or awaiting maintenance status. Column is entitled AWM.

d. Graduated space for displaying outstanding jobs that are in an awaiting parts status. Column is entitled AWP.

e. The VIDS board layout is flexible and can be used for a variety of informational presentations, but the preceding four elements are mandatory and shall be required of all branches and work centers.

f. Boards may have additional columns to monitor/manage such items as weekly PMS requirements, QA requirements (i.e., awaiting functional check, no-load, MAF completion), and to provide visual TAG-OUT indicators. Figure 9-2 shows a board with additional columns. Optional board columns would be used as follows:

(1) PMS - Pre-printed PMS MAF cards containing the MRC code (for example MAF cards with weekly periodicity MRC codes) are posted on the VIDS board at the beginning of the PMS week. Once posted, the PMS maintenance action is tracked to ensure completion by the end of the week.

(2) QA - For jobs requiring post-maintenance functional verification (no-loads, etc.). Jobs have been accomplished but are pending QA approval until those requirements are met. Also used for completed jobs awaiting QA MAF verification.

(3) TAG-OUT - Provides visual indication of tag-out conditions. Supplements current procedures with a VIDS board visual reference to outstanding tag-outs.

9.4 VIDS Board Verification

9.4.1 Daily verification of the maintenance control VIDS board with the work centers, by W/C, job sequence number (JSN) and Julian date, is essential to maintain current and correct job and equipment status. Concurrent status provides a quick and accurate review of all maintenance actions.

9.4.2 All MAF cards initiated by work centers will remain on the maintenance control, W/C, QA and MS (as required) VIDS boards until final action is completed. In order to maintain constant status of all maintenance tasks, every job status change must be reflected on each applicable VIDS board.

NOTE
Maintenance not scheduled for action within the next 30 days and that is listed on the Current Ship's Maintenance Project (CSMP) need not be displayed on the ALRE VIDS board.

9.4.3 Whenever a job is placed in AWM status or parts are required which halts work, the MAF card is moved from IN WORK to the proper column, either AWM or AWP. All changes must be reflected on the maintenance control VIDS board and all cognizant W/C VIDS boards.

9.4.4 Daily, at a time specified by the maintenance control supervisor, each W/C supervisor (or assistant)shall verify every outstanding MAF card and status on his/her VIDS board with maintenance control. Any variations in JCN, Julian date, job status, and/or outstanding MAF card will be resolved at this time. Verification may be done via phone, intercom, or in person using a written list, as locally established.

9.4.5 The W/C supervisor (or assistant) shall certify verification by annotating the date/time and initials alongside the W/C designator on the M/C VIDS board or on a form located near M/C VIDS board. If a local form is used, it must be posted as to be clearly visible and will be established for 1-day use.

9.4.6 For each MAF card, a ALRE MAF must be initiated. Daily verification includes physical sighting of those MAFs to verify that they are actually initiated.

9.5 Maintenance Action Form (MAF) Card

9.5.1 When maintenance is required, MAF cards are initiated and placed on the VIDS board. Maintenance control and the work centers will utilize duplicate 3 X 5 inch MAF cards, shown in figure 9-4, for every job requiring documentation. MAF cards will be inserted on the applicable VIDS line in the appropriate column, (IN WORK, AWM, or AWP). When the job is started, the MAF card is placed in the IN WORK column; if the job is deferred, the MAF card is placed in the AWM column; and, if parts are required before any further maintenance can be performed, the MAF card is placed in the AWP column. Maintenance control shall direct the work centers to place MAF cards IN WORK, AWM or AWP status, as appropriate.

9.5.2 The MAF card lists the W/C designation and JSN in the appropriate blocks. The "when discovered" Julian date shall be annotated on the MAF Card in the block provided to assist in tracking the job. This date must match the date found in block 17 of the ALRE MAF.

NOTE

The Organizational Maintenance Management System (OMMS) computer will automatically provide a Julian date when the JCN is generated. Review and change (if necessary) this number in OMMS to ensure it reflects the discrepancy's actual when discovered date if the maintenance data is entered into OMMS on a different date than when the discrepancy was actually discovered.

9.5.3 The MAF card uses colors in the priority section to indicate system and maintenance status. These colors are added as appropriate using colored pencil, felt-tip markers, etc., and shall be standardized as follows:

a. BLUE - used in the LIM block to indicate limited capability (i.e., approaching hit limit, marginal operability, etc.)

b. RED - used in DN block to indicate equipment is out of commission (i.e., inoperable, taken apart, reached hit limit, etc.)

c. NO COLOR - routine maintenance action not affecting equipment operability.

d. BLACK - when a maintenance action has been completed and inspected at the proper level, and only a functional check remains to return the equipment to service, a BLACK mark shall be made across all four blocks of the priority section.

9.5.4 Similarly, MS and QA blocks are provided to indicate requirements for MS augmentation of the cognizant W/C, and QAI/CDQAI (not CDI) inspection of the job. The method of annotating these blocks shall be standardized as follows:

a. GREEN - used to indicate MS augmentation where maintenance support action is required to assist the cognizant work center.

b. YELLOW - used to indicate requirement for QAI/CDQAI (not CDI) inspection of maintenance action.

9.5.5 Jobs requiring QAI/CDQAI (not CDI) inspection will be reflected with a MAF card on the QA VIDS board. Jobs requiring MS participation will be similarly reflected on the MS VIDS board. MS personnel job man-hours will be documented on the MAF (in block 30, S/F MHRS) as a part of the total job man-hours by the cognizant W/C supervisor; additionally, MS will track their own man-hours on the appropriate MAF card for transcription into a monthly summary. (MAFs do not segregate man-hours by work center.) MS and QA must

track status changes of all pertinent jobs (MAF cards) on their respective VIDS boards.

9.6 ALRE Maintenance Action Form (MAF)

9.6.1 The ALRE MAF (OPNAV 4790/160) is designed to provide recorded information concerning inspections and maintenance actions performed on ALRE (see figure 9-5). The ALRE MAF shall be used to document all corrective and preventive inspections and maintenance actions performed on ALRE with the exception of pre- and post-operational inspections. Pre- and post-operational inspections may instead be documented on formal pre- or post-operational inspection forms which shall be retained for a minimum of 5 operating days. Appendix E contains sample inspection forms that may be modified to fit local requirements.

9.6.2 Inspections and maintenance actions documented on the MAF are coded in sufficient detail to permit collection of necessary information relating to maintenance actions and equipment performance. Codes used on the MAF permit machine processing within OMMS. Blocks 1 through 45 of the MAF are identical to the OPNAV 4790/2R. As such, the ALRE MAF is used to support the Current Ships' Maintenance Project (CSMP). The MAF serves as a single source document that will provide automatic processing of OPNAV 4790/2Rs and 4790/CKs, Automated Work Requests (AWRs) (OPNAV 4790/2R), automatic updating of CSMP, equipment history files, parts usage data, trend analysis, and man-hour documentation.

NOTE

Use of correct maintenance codes when documenting ALRE maintenance is essential for accurate local and historical trend analysis.

9.6.3 The MAF format is identical to that used in the Shipboard Organizational Maintenance Management System (OMMS). After job completion, M/C reviews the accuracy of the completed MAF, closes out the MAF and forwards the MAF to QA for filing. A copy may be provided to the work center. Utilize the guidance provided in figures 9-6 through 9-7 to enter data into OMMS and to route Maintenance Action Forms (MAFs). In the event that the OMMS system is down, MAF-1 is retained by M/C until entry into the system is completed.

9.6.4 To provide the information required, MAFs must be completed, as appropriate, for each inspection and/or maintenance action. A block-by-block description is presented in appendix B for each application. It is essential that all applicable blocks be filled out correctly, both to provide accurate maintenance data and to avoid rejection during data processing.

NOTE

When entering MAF data into OMMS the computer will automatically generate the UIC. Therefore, it is not necessary to annotate the UIC on an ALRE MAF unless a hard copy will leave the command. The work center designation must be annotated on the MAF and entered into OMMS. The JSN is assigned sequentially by the OMMS computer, which ensures that each JCN is unique. This number must be annotated on the ALRE MAF.

The MAF is divided into seven areas as follows:

a. Information: contains JCN, equipment configuration data, and discrepancy description codes.

b. Deferral Action: contains deferral dates and man-hours expended information.

c. Completed Action: contains action taken codes, completion date and total man-hours expended.

d. Remarks/Description: contains a narrative description of the discrepancy and work done to correct it.

e. Additional ALREMP Information: contains ALRE-specific codes, safety tag data, shot/hit/VLA data, PMS data and QA/ALRE MO signatures.

f. Material Control: contains quantity, nomenclature, part number and contract number for requisitioned items. Also contains two blocks for AIMD-assist VIDS/MAF JCNs.

g. ALRE Tool Control: contains lines for the W/C and central tool room tool POs signatures.

9.6.5 When a maintenance action is completed, the appropriate work center will complete a MAF. This will provide a comprehensive record of the maintenance action performed and establish historical data for future reference.

9.6.6 MAF retention:

a. Corrective Maintenance Action. MAFs shall be retained by QA for a period of 1 year.

b. Preventive Maintenance Action. For all PMS actions requiring data entry into OMMS, only the most recent MAF for each PMS action shall be retained by QA.

9.7 Unscheduled (Corrective) and Scheduled (Planned Maintenance System (PMS)) Maintenance Procedures

9.7.1 Figure 9-6 depicts the normal flow of maintenance documentation during a corrective maintenance action and figure 9-7 depicts the normal flow for preventative maintenance procedures.

NOTE

MAFs should be filled out as the job progresses to avoid processing delays when the job is completed.

9.8 ALRE PMS Maintenance Requirement (MR) Status Boards

9.8.1 PMS requirements are based on either calendar periods (e.g., daily, weekly, monthly) or situational requirements (number of catapult shots and arresting gear arrestments.) Documentation of shots and hits is mandatory to ensure that prescribed maintenance requirements and inspections are performed on time. Tracking of shots and hits is maintained by use of the Automated Shot and Recovery Log Program (ASRL), Daily “R” Status file and maintenance requirements (MR) status boards. Specific instructions on ASRL is contained in NAWCADLKE-48J500-0009. MR Status boards will be located in maintenance control and each applicable work center to track PMS Maintenance Requirements (R-checks).

9.8.2 MR status boards will reflect, at a minimum, situational PMS maintenance requirements (R-checks). Status boards will be locally procured/produced and will contain information on each time/shot/hit-related maintenance task specified in the PMS system. The minimum data elements required include:

a. MR card number (M-1R, M-15R, etc.)

b. Brief description of task and frequency of requirement.

c. Shot or hit number MR due and last accomplished.

d. Total shots or hits to date.

9.8.3 Maintenance control's MR status board will reflect all W/C requirements.

NOTE

Status boards are official records containing vital information. Maintenance control boards will be maintained and changed only by the ALRE maintenance officer, maintenance control supervisor, or a person specifically designated by the ALREMO. Work center boards will be maintained by the W/C supervisor or his/her designated assistant.

9.8.4 Work center supervisors will provide updated information on shots, hits or changes which affect equipment status as it occurs or at the completion of each operating day.

9.8.5 Daily verification of the maintenance control MR status board with the work centers is essential to maintain current and correct job and equipment status. In order to ensure accuracy, correctness, and continuity of shot, hit, and/or inspection requirements, every status change must be reflected on each applicable MR status board.

9.8.5.1 Daily, at a time specified by the M/C supervisor, each W/C supervisor shall verify MR status on his/her MR status board with maintenance control. Any variation in any MR element will be resolved at this time. Verification may be done via phone, intercom, or in person using a written list, as locally established.

9.8.5.2 The W/C supervisor (or assistant) shall certify verification by annotating with date/time and initials alongside the W/C designator on the M/C MR status board. The M/C supervisor shall annotate date/time that all work centers have verified on the upper right-hand side of the M/C MR status board.

9.9 Supporting Maintenance

9.9.1 Certain ALRE maintenance support is provided by the ship's AIMD. Documentation of AIMD support requires use of the Visual Information Display System/Maintenance Action Form (VIDS/MAF) (OPNAV 4790/60) shown in figure 9-8 or entered into NALCOMIS or a work request. This is used to request AIMD services of items beyond V-2 division capability, including non-destructive inspection (NDI), emergency parts manufacture and other such services as may be needed. When AIMD support is required, a work request is initiated utilizing AIMD MAF form OPNAV 4790/60. The cognizant work center will initiate an ALRE MAF referencing the AIMD MAF JCN in the block provided. When the job is completed, the work center will forward the controlling ALRE MAF with the completed AIMD MAF copy attached to M/C for review. M/C reviews the accuracy of the completed MAF (with completed AIMD MAF attached), closes out the MAF and forwards the MAF to QA for filing. A copy may be provided to the work center.

9.10 Deviations from Normal MAF/MAF Card Procedures

9.10.1 Safety of operations is paramount. In those situations where extraordinary actions are required to either protect life and equipment or to accomplish the mission, routine documentation procedures may be waived until normal operations can be resumed.

Documentation of all maintenance actions will follow the action in such cases; however, the proper quality assurance verification and surveillance must be maintained. The following guidelines will be adhered to:

a. In cases where immediate maintenance action is necessary to preclude certain or likely death/injury to personnel or loss/damage to equipment, and where time is extremely critical, emergency deviation from routine MAF flow/work documentation is justified and may be authorized. (See figure 9-9.)

b. If the ALRE maintenance officer/maintenance supervisor or higher authority has approved emergency deviation, only the MAF documentation procedure is modified. All maintenance procedures remain as previously described. The MAF may be initiated after the job is complete, provided the ALRE maintenance officer/maintenance supervisor and QA have ensured that all maintenance actions were satisfactorily completed by personally witnessing events. This is the only time equipment can go from DOWN to UP status without an ALRE maintenance officer/maintenance control supervisor signature on a MAF.

NOTE

Ensure contract numbers of parts installed are annotated on the MAF when it is completed.

c. In cases which do not meet the criteria for emergency deviation as given in paragraph 9.10a, but timely return of equipment to operational status is still necessary, the work center will take the MAF to the job site so that the ALRE maintenance officer/maintenance control supervisor may sign it off as a completed job immediately upon witnessing the work and appropriate QA inspection and operational check, if required. This procedure entails all the same elements as routine MAF flow/work documentation.

9.11 Tracking Outside Maintenance Activity Job Status

9.11.1 During technical availability’s or periods such as restricted availability’s (RAVs), selected restricted availability’s (SRAs), complex overhauls (COHs)and planned incremental availability’s (PIAs), outside maintenance activities may repair or modernize Aircraft Launch and Recovery Equipment (ALRE). It is imperative that the ALRE maintenance officer monitors this industrial activity repair progress and performance. An additional VIDS board shall be utilized to track all work being performed within V-2 division by an activity other than ship's force. Figure 9-10 depicts the recommended format of this VIDS board. Ship's force maintenance during availabilities and COHs

will still be tracked using the standard maintenance control and work center VIDS boards.

9.11.2 The authorized integrated work package control document (IWPCD) will be used to identify jobs to be tracked and the accomplishing activities. This document also identifies cognizant work centers, JSNs of all work planned for VB work centers, and JSNs of all other jobs that may affect divisional work centers (but that are not listed under VB) such as ship alterations.

9.11.2.1 During availabilities where the IWPCD is not used, JSNs may be obtained from the ship's force work list. Additionally, liaison with the ship's maintenance manager may help with determining screening action for jobs requiring outside maintenance activity assistance.

9.11.3 Utilizing a MAF card specifically designed for the outside maintenance activity MAF board (see figure 9-11), transcribe the following information from the IWPCD: work center, JSN, brief job description, extended ships work breakdown structure (ESWBS), IWPCD item number, equipment location, and the activity accomplishing the task. Place each MAF card on the outside maintenance activity VIDS board under the section designated for that particular activity and W/C. The QA block at the bottom right corner of this MAF card may be used like that on a standard MAF card. The activity block at the bottom right corner may have the outside maintenance activity annotated and/or be color coded to indicate the activity; color coding should not conflict with those color codes described in paragraphs 9.5.3 through 9.5.4. When color-coding is used, a legend depicting which color refers to which activity should be displayed at the top of the VIDS board.

9.11.4 Each job approved for accomplishment within the V-2 Division must be tracked utilizing either a locally printed Progress Report Sheet (PRS) figure 9-12, automated data base or other tracking method to maintain up to date status of each outside maintenance activity job and correspond to each MAF card on the outside maintenance activity VIDS board.

NOTE
THE USE OF A PROGRESS TRACKING METHOD IS MANDATORY.

9.11.4.1 Review the IWPCD and transcribe the following to the tracking method: W/C, JSN, job description, ESWBS, and IWPCD item number.

9.11.4.2 On a weekly basis, or as required, the tracking method utilized will be updated by indicating percentage toward completion

and by annotating notes deemed necessary by the ALRE maintenance officer.

NOTE

Ensure all jobs that require a functional test or inspection by ship's force personnel are monitored for completion of this step.

9.11.4.3 If utilized, PRSs should be initiated for each job approved for accomplishment within V-2 Division. PRSs shall be kept in a loose leaf, three-ring binder. Filing them in work center/job sequence number order provides an easy cross-reference with the outside maintenance activity VIDS board. A PRS may be discarded when that job is completed and the requisite forms have been completed (OPNAV 4790/CK, ALRE MAF, Configuration Service Change Status Form 1511, etc.).

9.11.4.4 If a new job develops as a result of an Emergency Essential Repair (EER) or Assist Ship's Force (ASF) funding being made available, an additional MAF card must be originated and the MAF card placed on the outside maintenance activity VIDS board and added to whichever tracking method is utilized.

9.11.5 In addition to completing the specific job on the Current Ship's Maintenance Project (CSMP), jobs having Equipment Identification Codes (EICs) for ALRE equipment (7A through 7M, LH, and TU), require an ALRE MAF to be originated and submitted. Submission of an OPNAV 4790/CK or Configuration Service Change Status Form No.1511 may also be required.

9.11.6 When completing an ALRE MAF to document work accomplished by outside maintenance activities, the MAF shall be filled out as appropriate, with the following special instructions:

a. Block 29 (Action Taken):

(1) For maintenance actions where the outside activity provides all parts, ensure the numeral "3" (which means "Maintenance Completed, No Parts Required") is entered.

(2) For maintenance actions where ship's force provides some or all parts for the job, ensure the proper code is entered; also ensure the Remarks/Description section of the ALRE MAF is detailed enough to reflect those portions of maintenance performed by ship's force and by the outside activity.

NOTE

For jobs performed by outside maintenance activities where ship's force provides some or all parts, or where ship's force provides maintenance assistance, including system or component

disassembly or reassembly, a standard MAF card, an outside maintenance activity MAF card, and an ALRE MAF are required. Each will bear the same JSN. The standard MAF card will be placed on the normal divisional VIDS board to track ship's force maintenance and/or parts; the outside activity MAF card will be used to track that activity's job status; and the MAF will be used to document the job. Only ship's force man-hours should be recorded on the normal MAF/MAF card. The standard MAF card should never be removed from the divisional VIDS board before the outside maintenance activity MAF card is removed from its VIDS board.

b. Block 36 (Continuation Sheet): Ensure this block is checked when it is necessary to continue Block 35 (Remarks/ Description) comments on additional ALRE MAFs.

c. Block 38 (First Contact/Maint. Man): Enter the name of the outside activity that completed the work, i.e., VRT, etc. Do not attempt to obtain a signature for accomplished work.

d. Final QA Inspected by:

(1) For maintenance actions where the outside activity provides all parts, this block is used by ship's force to indicate final inspection of the work and receipt of components/contract numbers installed and NDI documentation. For work completed by an outside maintenance activity, this block does not represent a total quality assurance effort on the part of ship's force. The signature of the quality assurance inspector (QAI) or collateral duty quality assurance inspector (CDQAI) in this block merely signifies that the equipment was functioned and the component or system operates as required.

(2) For maintenance actions where ship's force removes the equipment, reinstalls the equipment, or functions the equipment, the QAI/CDQAI signature signifies that all documentation of the outside activity's work is complete/correct (including required documentation for non-destructive inspection (NDI), hydrostatic testing, etc.) and that all work accomplished by ship's force has received the applicable inspections by V-2 QA.

e. Start/stop times: These blocks are used to assist the work center supervisor in determining total ship's force man-hours expended for the job. This total, including any maintenance support (MS) man-hours, will be entered in Block 30 (S/F MHRS).

NOTE

Do not enter any man-hours expended by outside maintenance activities in the start/stop times blocks.

f. Block 35 (Remarks/Description): A concise narrative description of the completed maintenance action shall be entered here.

g. The material control section of the ALRE MAF will not normally be utilized when documenting accomplishment of outside maintenance activity work. The ALRE tool control section will be completed only when ship's force personnel check out tools from the work center or central tool room.

NOTE

Ship's force personnel should obtain contract numbers, etc., from the outside maintenance activity for equipment that was installed, modified, or repaired. Enter this information or edit existing records, as appropriate, in the Installed/Discrepant Parts List (Shipboard Installed Parts database) to ensure that an accurate record of installed equipment is kept onboard and is forwarded to NAVAIRWARCENACDIV Lakehurst.

NOTE

If an adequate number of personnel cannot be maintained in order to execute proper QA of ship’s force and shipyard maintenance actions, the type commander shall immediately be notified.

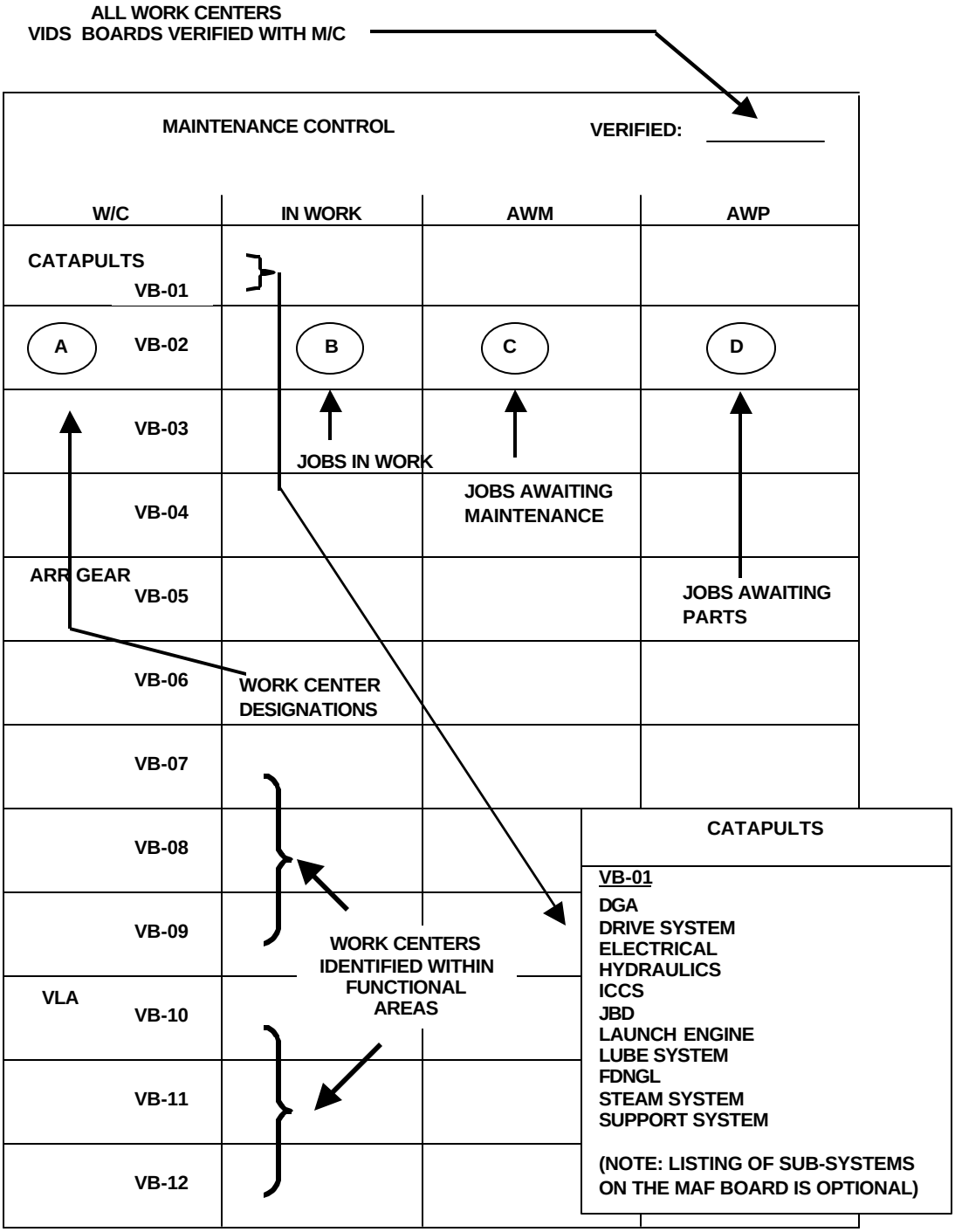


Figure 9-1. Maintenance Control VIDS Boards

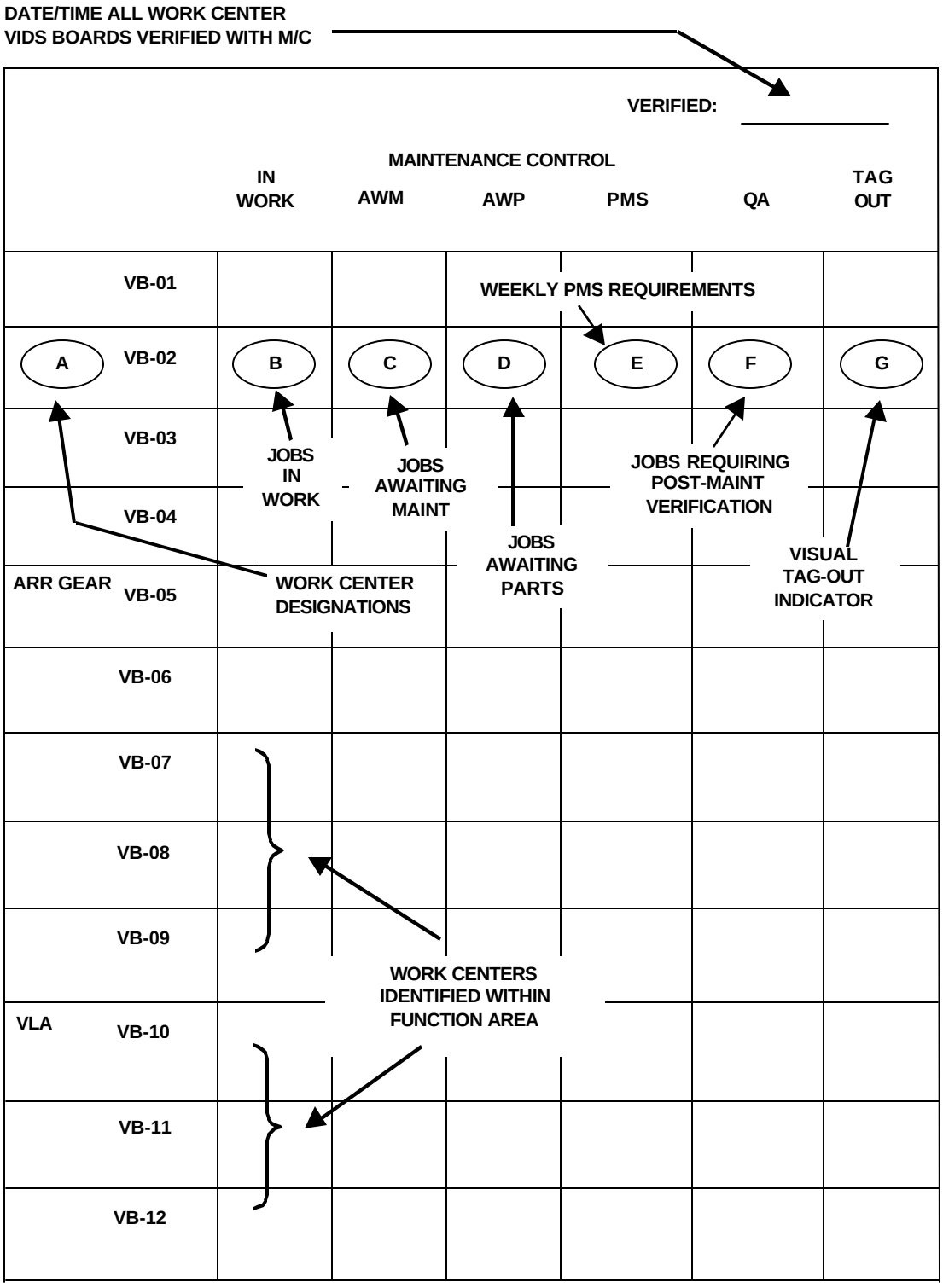


Figure 9-2. Maintenance Control VIDS Boards (Alternate)

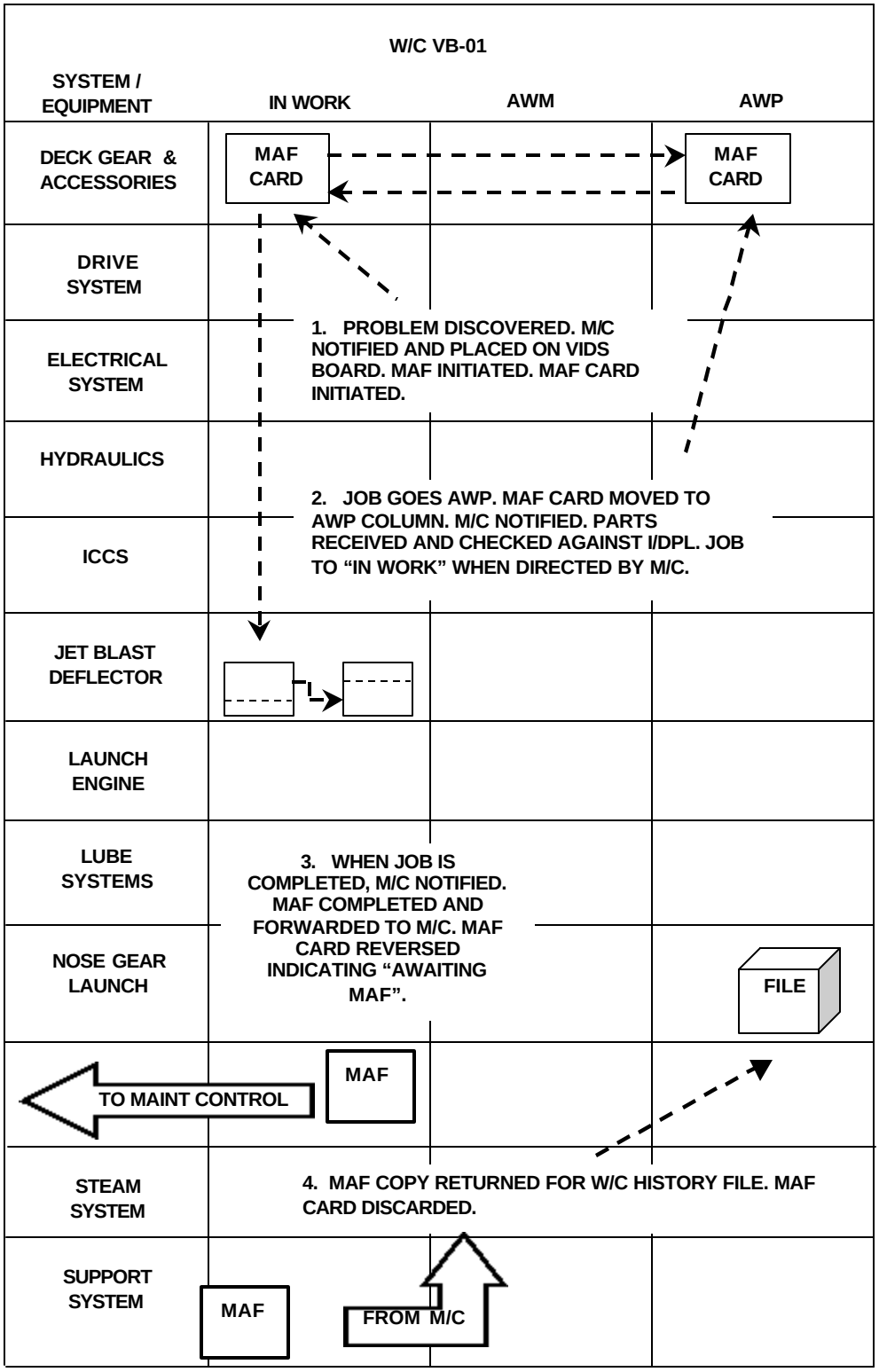


Figure 9-3. Work Center VIDS Board

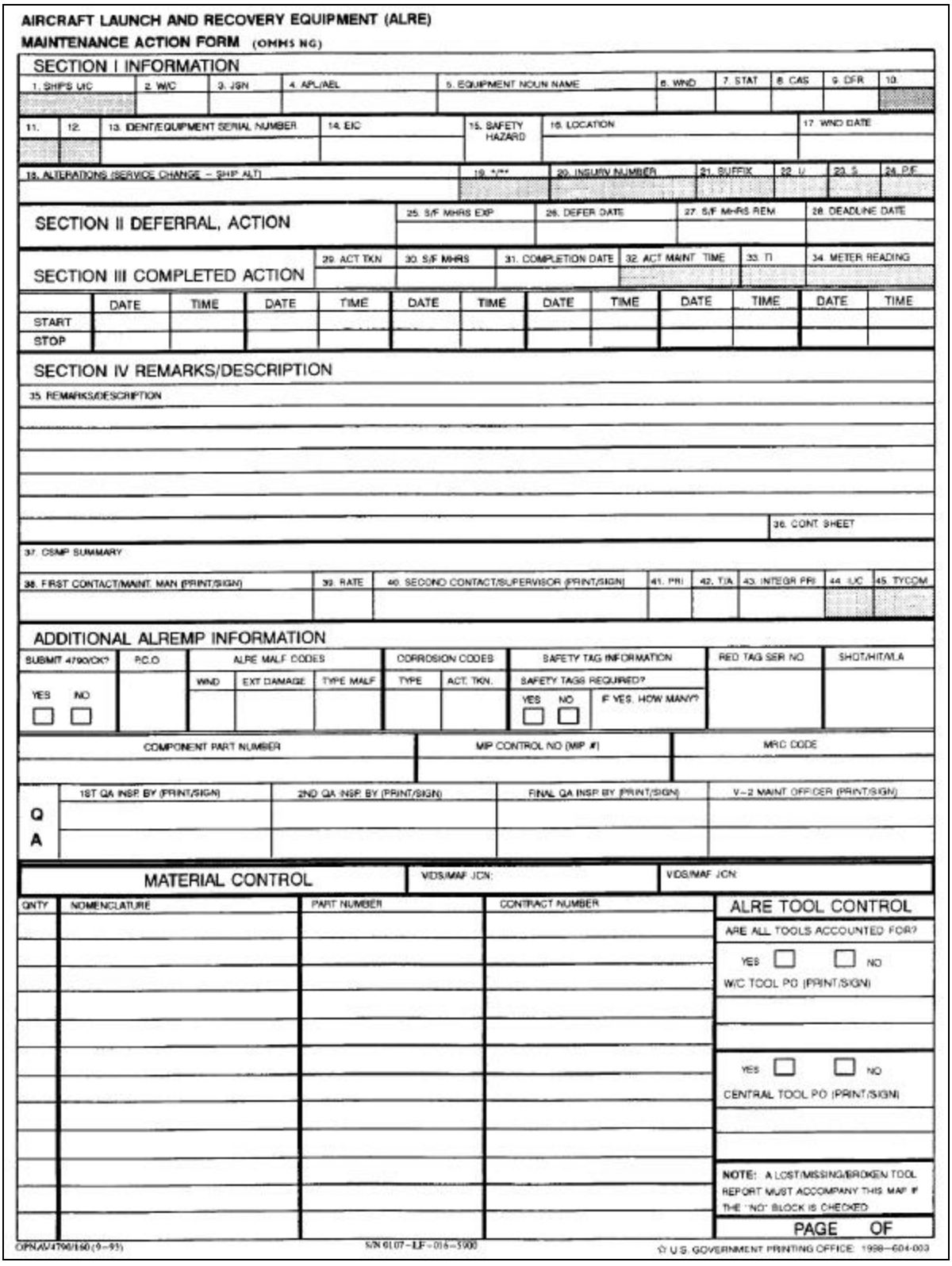
*** AWAITING MAF ***		JSN	W/C
	JULIAN DATE	JCN	

JCN		JULIAN DATE	DISCREPANCY/PMS	PRIORITY			
W/C	JSN						
			MRC _____	QA	MS	DN	LIM

The MAF Card is locally produced and is used to monitor and manage the workload. Outstanding maintenance actions will be indicated by a MAF Card on both the M/C and W/C VIDS Boards, as well as in QA and MS, when applicable. When the job is completed and reported to M/C, the MAF Card is simply reversed on the board to indicate "AWAITING MAF" until the MAF is completed, delivered to M/C, and signed by the Maintenance Officer/Maintenance Control Supervisor. M/C then discards the MAF Card and the W/C discard the MAF Card upon notification from M/C. QA will discard its MAF Card upon receipt of MAF. MS discards its MAF Card upon job completion and transfer of man-hours to summary sheet.

NOTE: The large, unused central portion of the front of the MAF Card may be modified locally to help track supply data supply data, man-hours, work start/stop, etc., if desired.

Figure 9-4. MAF Card



AIRCRAFT LAUNCH AND RECOVERY EQUIPMENT (ALRE)
MAINTENANCE ACTION FORM (OMMS NG)

SECTION I INFORMATION

1. SHIPS UIC	2. W/C	3. JSN	4. APL/AEL	5. EQUIPMENT NOUN NAME	6. WND	7. STAT	8. CAS	9. DFR	10.

11.	12.	13. IDENT/EQUIPMENT SERIAL NUMBER	14. EIC	15. SAFETY HAZARD	16. LOCATION	17. WND DATE

18. ALTERATIONS (SERVICE CHANGE – SHIP ALT)	19. */**	20. INSURV NUMBER	21. SUFFIX	22. U	23. S	24. P/F

SECTION II DEFERRAL, ACTION

25. S/F MHRS EXP	26. DEFER DATE	27. S/F MHRS REM	28. DEADLINE DATE

SECTION III COMPLETED ACTION

29. ACT TKN	30. S/F MHRS	31. COMPLETION DATE	32. ACT MAINT TIME	33. TI	34. METER READING

	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME
START												
STOP												

SECTION IV REMARKS/DESCRIPTION

35. REMARKS/DESCRIPTION

36. CONT SHEET

37. CSMP SUMMARY

38. FIRST CONTACT/MAINT. MAN (PRINT/SIGN)	39. RATE	40. SECOND CONTACT/SUPERVISOR (PRINT/SIGN)	41. PRI	42. T/A	43. INTEGR PRI	44. UIC	45. TYCOM

ADDITIONAL ALREMP INFORMATION

SUBMIT 4790/CK?	P.C.O	ALRE MALF CODES			CORROSION CODES		SAFETY TAG INFORMATION			RED TAG SER NO	SHOT/HIT/ALA
YES ☐ NO ☐		WND	EXT DAMAGE	TYPE MALF	TYPE	ACT. TKN.	SAFETY TAGS REQUIRED? YES ☐ NO ☐		IF YES, HOW MANY?		

COMPONENT PART NUMBER	MIP CONTROL NO (MIP #)	MRC CODE

Q A	1ST QA INSP BY (PRINT/SIGN)	2ND QA INSP BY (PRINT/SIGN)	FINAL QA INSP BY (PRINT/SIGN)	V-2 MAINT OFFICER (PRINT/SIGN)

MATERIAL CONTROL | VIDS/MAF JCN: | VIDS/MAF JCN:

QNTY	NOMENCLATURE	PART NUMBER	CONTRACT NUMBER

ALRE TOOL CONTROL

ARE ALL TOOLS ACCOUNTED FOR?

YES ☐ ☐ NO

W/C TOOL PO (PRINT/SIGN)

YES ☐ ☐ NO

CENTRAL TOOL PO (PRINT/SIGN)

NOTE: A LOST/MISSING/BROKEN TOOL REPORT MUST ACCOMPANY THIS MAF IF THE "NO" BLOCK IS CHECKED

PAGE OF

OPNAV 4790/160 (9-95) S/N 0107-LF-016-5900 ☆ U.S. GOVERNMENT PRINTING OFFICE: 1998—604-003

Figure 9-5. Aircraft Launch & Recovery (ALRE) Maintenance Action Form (OPNAV 4790/160)

Note: Task depicted horizontally occurs at approximately the same time.				
Work Center	**Maintenance Control**	**Quality Assurance**	**Maintenance Support**	**Material Control**
1a. Finds a problem, Notify M/C of problem.	1b. Notified of problem. Notify QA and MS (as applicable)	1c. Notified of problem (as applicable)	1d. Notified of problem (as applicable)	
2a. Enters MAF data into OMMS to get JSN (AWR deferral Process). Print MAF from OMMS and fill Out MAF Card				
3a. Notify M/C of JSN	3b. Get JSN from W/C. Fill out MAF Card and place in AWM. Notify QA and MS of JSN (as applicable).	3c. Get JSN from M/C. Fill out MAF Card and and place in AWM (as applicable).	3d. Get JSN from M/C. JSN. Fill out MAF Card and place in AWM (as applicable)	
4a. As directed by M/C, call and place MAF Card IN WORK.	4b. Inform W/C to start job. Notify QA and MS (as applicable).	4c. MAF Card to IN WORK (as applicable).	4d. MAF Card to IN WORK (as applicable).	
5a. Assign workers. Initiate Tag Out procedures (as applicable). Obtain tools .	5b. Issue Red "Danger" Tags (as applicable).			
6a. Order parts through OMMS (as applicable). Notify M/C that parts are requested. Move MAF Card to AWP	6b. Move MAF Card to AWP. Notify Material Control of JSN. Notify QA and MS (as applicable.) 6f. Review printout of parts requested. Approve parts order and deliver printout to Material Control.	6d. MAF Card to AWP (as applicable).	6e. MAF Card to AWP (as applicable).	6.c Call up JSN in OMMS and perform a "print screen" of parts ordered by W/C. Deliver printout to Maint. Officer/ Chief. 6g. Approve parts in OMMS for ordering
7b. Pick up parts from Material Control. Notify M/C and place MAF Card IN WORK (as directed by M/C). Screen I/DPL. Annotate contract numbers on OMMS printed MAF.	7c. Place MAF Card IN WORK. Notify QA and MS (as applicable).	7d. Place MAF Card IN WORK (as applicable).	7e. Place MAF Card IN WORK (as applicable).	7a. Receive parts Screen I/DPL. Notify W/C to pick up parts. Notify M/C.

Figure 9-6. Unscheduled (Corrective) Maintenance Procedures (pg 1 of 2)

Note: Task depicted horizontally occurs at approximately the same time.				
Work Center	**Maintenance Control**	**Quality Assurance**	**Maintenance Support**	**Material Control**
8a. Job complete. Comply with tool Control, clear tags, and notify M/C. Perform Functional checks (as applicable).	8b. Notified job complete. Notify QA(as applicable).	8c. Witness functional checks (as applicable).	8d. Job complete Document MS man-hours. Discard MAF Card	
9a. Enter information from printed OMMS MAF into OMMS (under Change maintenance actions). Print 2 part MAF from OMMS.				
10a. Maintenance person signs printed MAF.		10b. Signs MAF.		
11a. WCS signs and forwards MAF to M/C. Turn MAF Card to AWAITING MAF.	11b. Turn MAF Card to AWAITING MAF.	11c. Turn MAF Card to AWAITING MAF (as applicable).		
12b. Receive copy of MAF for W/C history. Discard MAF Card.	12a. Maintenance Officer/Chief review, Sign MAF. M/C. OMMS operator enters data into OMMS and provides copy to W/C for history files. Discard MAF Card.			
	13a. After MC OMMS operator enters data Into OMMS, enters parts replaced into I/DPL, closes JSN. Forwards original MAF to QA	13b. Receives MAF original for history file. Discard MAF Card. NOTE When requesting work from AIMD, attach Copy 4 of VIDS/MAF to ALRE		

Figure 9-6. Unscheduled (Corrective) Maintenance Procedure (pg. 2 of 2)

Note: Task depicted horizontally occurs at approximately the same time.

Work Center	Maintenance Control	Quality Assurance	Maintenance Support	Material Control
1a. Identifies scheduled maintenance to be completed.				
2a. Enters MAF data into OMMS to get JSN (AWR deferral process). Print MAF from OMMS and fill out MAF Card.				
3a. Notify M/C of. JSN.	3b. Get JSN from W/C. Fill out MAF Card and place in AWM. Notify QA and MS of JSN (as applicable).	3c. Get JSN from M/C. Fill out MAF Card and and place in AWM (as applicable).	3d. Get JSN from M/C. Fill out MAF Card and place in AWM (as applicable).	
4a. As directed by M/C, call and place MAF Card IN WORK.	4b. Inform W/C to start job. Notify QA and MS(as applicable).	4c. MAF Card to IN WORK (as applicable).	4d. MAF Card to IN WORK (as applicable).	
5a. Assign workers. Initiate Tag Out procedures (as applicable). Obtain tools.	5b. Issue Red "Danger" Tags (as applicable).			
6a. If parts are needed, order parts through OMMS. Notify M/C that parts are requested. Move MAF Card to AWP	6b. Move MAF Card to AWP. Notify Material Control of JSN. Notify QA and MS (as applicable.) 6f. Review printout of parts requested. Approve parts order and deliver printout to Material Control.	6d. MAF Card to AWP(as applicable).	6e. MAF Card to AWP(as applicable).	6.c Call up JSN in OMMS and do a "print screen" of parts ordered by W/C. Give printout to Maint. Officer/Chief. . 6g. Approve parts in OMMS for ordering
7b. Pick up parts from Material Control. Notify M/C and place MAF Card IN WORK (as directed by M/C). Screen I/DPL. Annotate contract numbers on OMMS printed MAF.	7c. Place MAF Card IN WORK. Notify QA and MS (as applicable).	7d. Place MAF Card IN WORK (as applicable).	7e. Place MAF Card IN WORK (as applicable).	7a. Receive parts. Screen I/DPL. Notify W/C to pick up parts. Notify M/C

Figure 9-7. Scheduled Maintenance (PMS) Procedures (pg. 1 of 2)

Note: Task depicted horizontally occurs at approximately the same time.				
Work Center	**Maintenance Control**	**Quality Assurance**	**Maintenance Support**	**Material Control**
8a. Job complete. Comply with tool control, clear tags, and notify M/C. Perform Functional checks (as applicable).	8b. Notified job complete. Notify QA(as applicable).	8c. Witness functional checks (as applicable).	8d. Job complete. Document MS man-hours. Discard MAF Card.	
9a. Enter information from printed OMMS MAF into OMMS (under change maintenance actions). Print MAF from OMMS.				
10a. Maintenance person signs printed MAF.		10b. Signs MAF		
11a. WCS signs and forwards MAF to M/C. Turn MAF Card to AWAITING MAF.	11b. Turn MAF Card to AWAITING MAF.	11c. Turn MAF Card To AWAITING MAF (as applicable).		
12b. Receive copy of MAF for W/C history. Discard MAF Card.			12a. Maintenance Officer/Chief review, Sign MAF. M/C OMMS operator enters data into OMMS and provides copy to W/C for history files. Discard MAF Card.	
	13a. After MC OMMS operator enters data into OMMS, enters parts into I/DPL, closes JSN. Forward. original MAF to QA. NOTE When requesting work from AIMD, attach Copy 4 of VIDS/MAF to ALRE MAF and retain by QA.	13b. Receives MAF original for history file. Discard MAF Card		

Figure 9-7. Scheduled Maintenance (PMS) Procedure (pg. 2 of 2)

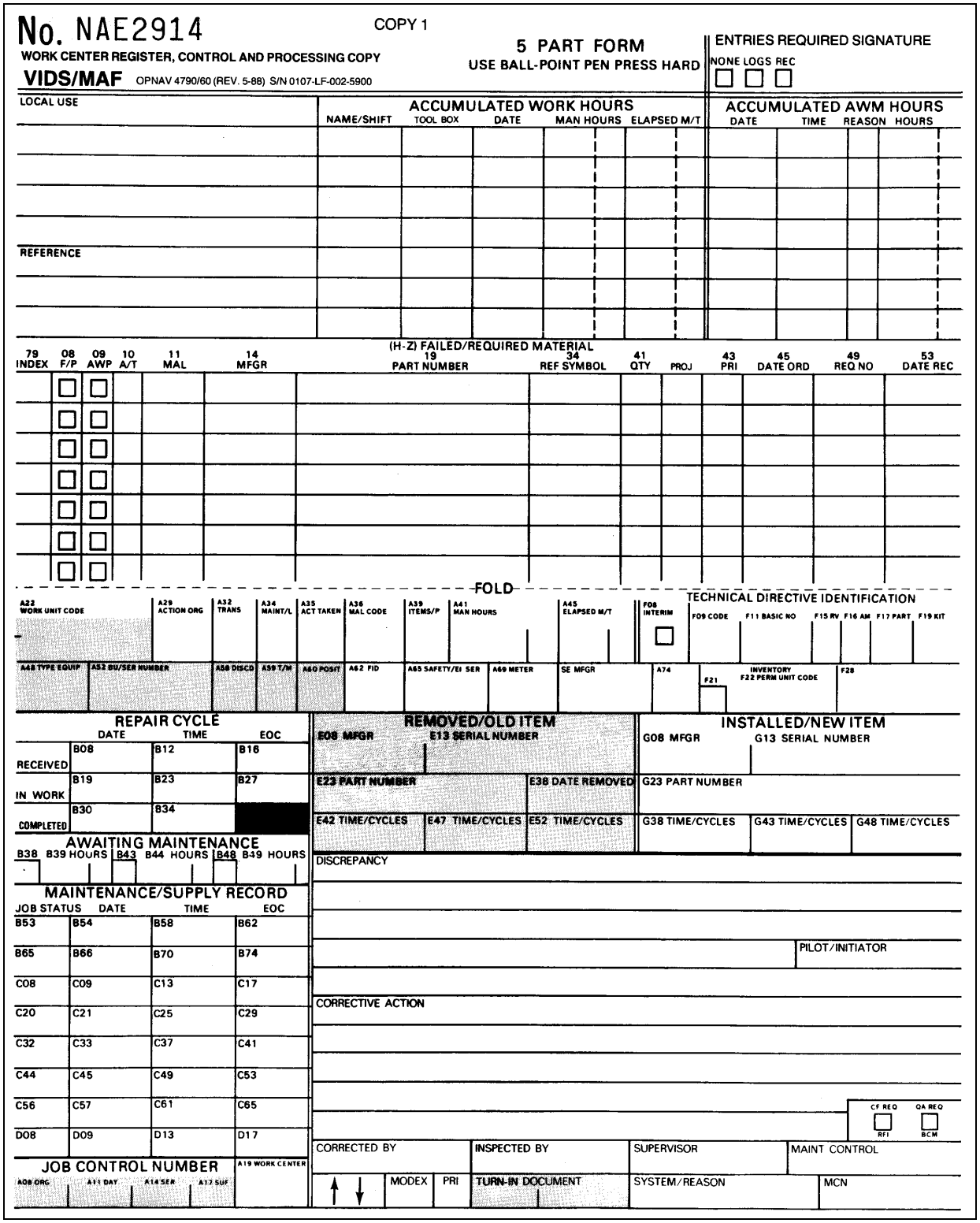


Figure 9-8. VIDS/MAF (OPNAV 4790/60)

Note: Task depicted horizontally occurs at approximately the same time.

Work Center	Maintenance Control	Quality Assurance	Maintenance Support	Material Control
1a. Discrepancy occurs. Equipment is down. Notify M/C. Place MAF Card on VIDS Board.	1b. Notified of problem. Notify Air Boss. Alert QA and MS (as applicable). Obtain. JSN and place MAF Card on VIDS Board.	1c. Notified of problem (as applicable). Place MAF Card on VIDS Board	1d. Notified of problem (as applicable) Place MAF Card on VIDS Board.	
2b. Assign Workers. Initiate Tag Out procedures (as applicable). Obtain tools, start job. When notified by M/C. Order parts as required.	2a. Notify W/C to start job. Issue Red "Danger" Tags (as applicable).			2c. Requisition parts
3c. Receive parts. Record contract numbers for MAF entry.		3b. Screen parts in I/DPL prior to installation.		3a. Receive parts. screen parts in I/DPL prior to issue
4a. Work complete. Functional checks Performed, as required. M/C notified. Status. Notify Air Boss.	4c. Maint. Officer/Chief witnesses maintenance Equipment placed in UP.	4b. Inspect job and witness Functional checks, as required	4d. Job complete. Document MS man-hours.	
5a. MAF completed, signed, and forwarded as appropriate. MAF Card processing follows normal flow.	5c. MAF/MAF Card processing follows normal MAF flow.	5b. MAF signed. MAF/MAF Card processing follows normal flow.		

Figure 9-9 Emergency MAF Procedures

OUTSIDE MAINTENANCE ACTIVITY VIDS BOARD

	AWM				IN WORK				AWD			
VB01	VB01-2691	FAIRLEAD SHEAVE	QA	PSNS	VB01-2961	ALIGN TROUGH CVRS #1	QA	VRT	VB01 2742	CLASS "B" OVHL WTRBK PMP	QA	SIMA
	VB01-2753	INSTALL MK-2 NGL #1	QA	PSNS	VB01-2761	REPLACE ROTARY DRUM ON CAT #1	QA	VRT				
VBO2	VBO2-2688	BOLT HOLE REPAIR #2	QA	VRT	VBO2-2689	STRESS RELIEVE LV PIPING #2	QA	PSNS				
VB02	VB03-1921	WIRE SPRAY JBD PIT #3	QA	SIMA	VB03-1963	INSTALL JBD DUPLEX STRAINER	QA	SUPSHIP				
VB04	VB04-1815	MANUF STEAM SMOTHERING BOX	QA	SIMA								

AWM = Job is Awaiting Maintenance

INWORK = Job is in work

AWD = Job is complete, but M/C is Awaiting Documentation

Figure 9-10. Sample Outside Maintenance Activity VIDS Board

Outside Maintenance Activity MAF Card					
ESWIBS NO			REQUIRED ?		SUBMITTED ?
ITEM NO			☐	ALRE MAF	☐
LOCATION			☐	COMP 2K	☐
POC			☐	4790/CK	☐
PHONE NO.			☐	FORM 1511	☐
			☐		☐
W/C	JSN	JOB DESCRIPTION	QA	ACTIVITY	

The Outside Maintenance Activity MAF Card is locally produced and is used to monitor and manage maintenance performed by activities other than ship's force. Outstanding maintenance actions will be indicated by a MAF Card on the Maintenance Control (Only) Outside Maintenance Activity VIDS Board. When the job is completed, including all required functional test, this card is moved to the AWD (Awaiting Documentation) column on the board. After Maintenance Control verifies that all associated reports have been submitted (OPNAV 4790/CK, Form 1511, etc.) and the ALRE MAF has been signed by the Maintenance Officer/Chief, this card is removed from the VIDS Board and discarded.

Figure 9-11. Outside Maintenance Activity MAF Card

PROGRESS REPORT SHEET

PERCENTAGE TOWARD COMPLETION										AWAITING FUNCTION
10	20	30	40	50	60	70	80	90	100	

ACTIVITY: **POC:** **PHONE NO:**

COMMENTS

W/C	JSN	DESCRIPTION	ESWIBS	ITEM NO.

Figure 9-12. Sample Progress Report Sheet

Chapter 10 - Material Control

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Chapter 10

Material Control

10.1 Navy Supply System

10.1.1 A major responsibility of the Navy Supply System is to provide material in support of the operation and maintenance of aeronautical equipment. Every effort is made to have material located when and where it is needed. The intent is to make the relationships between the suppliers and the user as simple and uncomplicated as possible within the boundaries of established logistics management requirements.

10.1.2 Navy stock is generally replenished on a system basis as a direct result of recorded usage/demand data, or on a program basis, from pre-calculated usage.

10.1.3 All elements of the Navy and Marine Corps, regardless of size and location, have an assigned activity to which they submit requests for material. These requests start at the organizational, intermediate, or depot level and flow to a designated point in the supply system.

10.1.4 In accordance with the Uniform Material Movement and Issue Procedures (UMMIPS), all activities within the Navy establishment are assigned a Force/Activity Designator (FAD), based on mission, for determining priorities for material support. Instructions for the use of the material priority system and for the assignment of FADs are issued by OPNAVINST 4614.1F (NOTAL) and implemented by Fleet Commander and Type Commander instructions. The FAD is correlated with the Urgency of Need Designator (UND) to determine the priority assigned to requisitions. For example, a FAD II activity can submit priority 2, 5, or 12 requisitions depending on the urgency of the requirement as related to mission readiness, while FAD III activities would submit priority 3, 6, or 13 requisitions for corresponding requirements. The priority assigned to material requisitions, not the project code, determines the speed with which a requisition must be filled by the supply system. UMMIPS abuse dilutes supply system responsiveness.

10.1.5 Supply responsibilities include operational readiness. This is achieved by following sound management practices in both maintenance and supply. Ship's Supply Department responsibilities are defined in NAVSUP P-485, Afloat Supply Procedures (NOTAL), NAVSUP P-487, Operation and Maintenance Instructions, and Ship's Store Afloat (MILSTRIP/MILSTRAP Manual) (NOTAL).

10.2 Policies and Concepts

10.2.1 Of several significant principles that must be followed to achieve success in maintenance and material management (3-M), the most important is extremely close liaison between supply and maintenance to achieve the common goal of optimum system operational readiness. It is important that these two complex operations have single points of contact for coordinating actions to achieve this goal.

10.2.2 V-2 (ALRE) material control is the primary point of contact for the ALRE maintenance organization and the maintenance support center (MSC). Utilizing the ship's maintenance support center (MSC), V-2 material control will coordinate all configuration management item research and the validation to ensure proper identification of required support.

10.2.3 Regular meetings should be held between Supply Department and V-2 division Material Control to resolve problem areas, establish local procedures that do not conflict with this or other governing instructions, while promoting material support effectiveness. Establishing points of contact between the supply department and V-2 maintenance/material personnel will enable effective routine resolution of material support issues.

10.2.4 When possible, the supply department should augment V-2 Division with a rated storekeeper (SK) to function within the material control branch.

10.3 V-2 Material Control Functions/Responsibilities

10.3.1 V-2 (ALRE) material control is the focal point for interface with supply. As such, all requirements for parts and material are routed through material control to the supporting supply department. Functional areas of responsibility include:

a. Ensure that maintenance requirements for parts and material are forwarded to supply, providing the supply department with a valid part number, manufacturer's code and technical reference. Issue a priority, project code, and JCN for all material requested.

b. Accept and maintain custody of defective ALRE discrepancy report material exhibits until receipt of exhibit disposition instructions from the Fleet Support Team (FST)or directing authority. Refer to paragraph 11.10.6.

c. Maintain and track all outstanding off-ship material from supply through the use of a material control register or

automated program (separate from the OPTAR). It shall, at a minimum contain the Nomenclature, Distribution Code, National Stock Number (NSN), Part Number, Priority and assigned JSN (if applicable) and shall be updated weekly with requisition status. This log/program shall be reviewed weekly by the ALRE Maintenance Officer/Maintenance Control Supervisor and distributed to all work centers to assist in tracking parts/material on order.

d. Maintain/monitor the working OPTAR for all V-2 accounts. This OPTAR will be validated IAW current command policies but must receive weekly verification/validation by the ALRE Maintenance Officer/Maintenance Control Supervisor.

e. Perform memorandum OPTAR charting and budgeting of cost. This includes out-year budgeting providing required reports to the appropriate chain of command as required.

f. Establish procedures for the internal control of accountable material, equipage and divisional spares. All divisional spares must be tracked internally by the use of an automated program. Quarterly verification of all spares shall be conducted and verified against the I/DPL. Specific attention shall be placed on parts with expiration and cure dates to ensure they are not utilized in maintenance procedures.

g. Maintain close liaison with maintenance control / maintenance supervisors to keep them informed of the parts and material procurement and how it affects the maintenance efforts.

h. Maintain control records to ensure the turn-in of defective components within established time frames.

i. Furnish technical advice and information to supply to assist in proper identification of required parts, material and supplies. Provide technical assistance in determining interchangeability and suitability of substituted items.

j. Material or Maintenance Control shall maintain a copy of all NAVAIRWARCENACDIV COG APL’s found in the SEF for use in material ordering periods when OMMS is not available. MSC shall provide a master list of all NAVAIRWARCENACDIV COG APL’s on a quarterly basis to V-2 division.

10.3.2 In the receipt/delivery of parts and material, material control shall:

a. Verify V-2 Division requisitioned material. Perform visual inspection to check for damage or defects.

b. Ensure that parts and material received are screened in the Installed/Discrepant Parts List (I/DPL) prior to stowage or issue to applicable work center. Inform the ALRE Maintenance Officer or Maintenance Control Supervisor of all items received without contract numbers.

c. Verify receipt of material with OPTAR to ensure complete issue of requisition quantity. Update appropriate logs/programs as applicable.

d. Establish delivery/pick-up points for issuance of material to the work centers and issue material to appropriate work centers as procedures direct.

e. If the item is as a remain-in-place (RIP), ensure the carcass is adequately preserved, packaged and handled to prevent damage or deterioration prior to turn in. Ensure turn-in documentation is maintained for a period of 1 year in V-2 division material control.

10.3.3 Initiate request for material using procedures outlined in OPNAVINST 4790.4C (NOTAL). Proper use of Organizational Maintenance Management System (OMMS) provides assistance in identifying the correct requisition and configuration information. Discrepancies encountered should be corrected through the use of COSAL Feedback Reports routed to MSC. When ship OMMS systems are inoperative, material control will fill out and use 1348/6 forms to requisition required material and parts. The following procedures are provided as the minimum requirements for material ordering:

a. The maintenance action Job Sequence Number (JSN) utilized for the material requisition will be from the current JSN in OMMS or the next sequential JSN from the work center.

b. Material request for items from V-2 spares shall be documented on the material parts list of the ALRE MAF and authorized by the ALRE Maintenance Officer/Supervisor prior to issue.

c. APL selection for all equipment maintenance actions shall be the equipment on which those repairs are being conducted. Where multiple APL’s are applicable, the APL used for the equipment maintenance action shall be the parent equipment on which the maintenance action is intended.

d. All material requisitions to the supply department in support of ALRE maintenance shall include a valid part number, manufacturers code, technical reference, APL, priority code, and Job Sequence Number (JCN).

10.4 Material Reporting

10.4.1 Material usage data is extremely important and must satisfy the requirements of various managerial and support levels of the Navy Supply Organization and Department of Defense. Data obtained through proper documentation of material usage determines the usage/failure/turn-around-time (TAT) rates for allowance development and allowance change requests. This action alone provides the documentation for a ship's on board allowance including required on hand quantities at supply centers in support of regional operating units.

10.4.2 Material reporting is accomplished by translating the data elements from maintenance/supply source documents into cost data. The source documents used are designed to allow cost data to be related to the specific equipment or system to evaluate the effectiveness of the support program.

10.5 Allowance Management

10.5.1 Introduction of new systems and maintenance of existing systems requires an adequate range and depth of material and equipment on hand for effective supply support. Prior to determining individual activity outfitting allowances, certain other logistic processes occur which have a direct bearing on allowance determination.

10.5.2 Provisioning is the process of determining the range and quantity of items (i.e., spares and repair parts, special tools, test equipment and support equipment) required to support and maintain an end item of material for an initial period of service. Provisioning includes the identification of items of supply, the establishment of data for cataloging, technical manual and allowance table preparation, and the preparation of instructions to ensure delivery of necessary support items with related end articles. In essence, provisioning encompasses all the actions necessary to ensure material support of the operational system. A basic input to the provisioning process is the maintenance plan, which identifies the repairable items and delineates their levels of removal and repair. Item selection conferences chaired by NAVICP, Philadelphia will establish SM&R codes for consumable items per approved equipment maintenance plans.

10.5.3 Repairable components are designated during the provisioning process. SM&R coding designates the maintenance level at which components will be repaired. If repaired locally, support items are provided to perform those repairs. If designated for depot repair, the unit must be sent to an overhaul point for repair or held over for shipyard repair action.

10.5.3.1 The supply system identifies all authorized remain-in-place repairables in the master Consolidated Remain In Place List (CRIPL). The supply system provides a Master Repairable Item List (MRIL) to all supply activities. The MRIL (NAVSUP P-4107) (NOTAL) is a listing in National Identification Item Number (NIIN) sequence indicating the designated overhaul point (DOP), either Navy or commercial.

10.5.3.2 ALRE components that are determined to be repairable at the intermediate level will be forwarded to the nearest IMA for repair. Although operational inspections, pre-operational checks, daily servicing, and/or daily MRC requirements are performed by operator personnel, maintenance personnel are responsible for component maintenance which requires disassembly and repair.

10.5.3.3 ALRE maintenance philosophy is based on the premise that properly administered upkeep and maintenance programs allow formal overhaul/depot level repair during the ship's overhaul or repair availability cycle. Therefore, major repair/refurbishing is scheduled on a routine basis during complex overhaul/planned incremental availability/selected restricted availability (COH/PIA/SRA) periods. Subsystems or individual equipment may be reworked as operating experience dictates or incidental to incorporation of modifications. Depot rework is scheduled for necessary repair that is beyond the capability of the ships crews, local IMAs, or is planned in conjunction with major repairs to other ship elements.

10.5.4 Uniform SM&R codes are used to identify the source of spares, repair parts and items of support equipment, and the levels of maintenance authorized to maintain, repair, overhaul, or dispose of all equipment. SM&R codes expedite the maintenance, repair, and overhaul of equipment by providing maintenance and supply personnel with the necessary information relative to the source of supply, and where applicable, the maintenance implications and recoverability status of items.

10.5.5 Uniform SM&R codes shall be used to the maximum degree practicable, in all commodity areas where provisioning is practiced, and shall be applicable to:

a. All new equipment being provisioned.

b. All equipment being re-provisioned.

c. Equipment modified or added by approved Engineering Change Proposal (ECP) actions.

10.5.5.1 The standard SM&R code format is composed of four parts consisting of a two-position source code, a two-position maintenance code, a one-position recoverability code, and a one position optional supplemental code. A quick reference for SM&R Codes may be found in figure 10-1.

a. Source codes in the first and second positions of the uniform format indicate the source for acquiring the item for replacement purposes; i.e., procured, stocked, manufactured, or assembled.

b. The maintenance code in the third position indicates the lowest maintenance level authorized to remove, replace and use the item.

c. The maintenance code in the fourth position indicates whether the item is to be repaired and identifies the lowest maintenance level with the capability to perform at least one type of complete repair action.

d. The recoverability code in the fifth position indicates the final disposition action on unserviceable items, and for repairables, the maintenance level responsible for repair/condemnation and disposal of the item.

e. The optional supplemental code is a NAVAIRSYSCOM/ NAVSUPSYSCOM assigned approved code that modifies or clarifies the source, maintenance or recoverability code as required. This code is usually reserved for aviation and specialty SM&R codes.

10.5.5.2 NAVAIRINST 4423.11 (NOTAL) provide specific information concerning policies, procedures, definitions, and responsibilities applicable to SM&R codes.

10.5.5.3 Changes in SM&R codes. As experience and/or item usage develops, originally assigned SM&R codes may need to be changed.

a. Change request procedures for repairable items.

(1) All SM&R code change requests for repairables will be submitted as follows:

(a) Fleet activities will submit all requests to the cognizant TYCOM. The TYCOM will approve or disapprove, and forward approved requests for ALRE to COMNAVAIRSYSCOM (PMA251). Requests received by COMNAVAIRSYSCOM directly from fleet activities without TYCOM approval will be returned to the originator without action.

(b) Requests must be submitted in the format of NAVAIRINST 4423.11 (NOTAL).

(2) COMNAVAIRSYSCOM will expedite processing of change requests and forward its decisions and appropriate backup information to the cognizant program supply inventory control point (PSICP). These decisions will be passed by letter or message at the discretion of COMNAVAIRSYSCOM.

(3) NAVICP, Philadelphia the cognizant PSICP will:

(a) Process all SM&R change decisions expeditiously.

(b) Update cognizant data files.

(c) Revise cognizant PSICP publications to cite latest SM&R code revisions.

(d) Process design notices, supply item change requests/analysis, and spare parts changes.

(e) Advise all concerned of actions taken, via Source Code Change Notice, citing effective date of change and date applicable publications will reflect the change.

(f) Chair periodic technical review conferences to evaluate fleet inputs.

10.6 Coordinated Shipboard Allowance List (COSAL)/Ship's Equipment File (SEF)

10.6.1 The Coordinated Shipboard Allowance List (COSAL)/Ships Equipment File (SEF) are technical and supply management documents are designed to enable ships to achieve maximum operating capability for extended periods of time independent of external logistics support and identify shipboard configuration records and parts.

10.6.2 The COSAL/SEF provide nomenclature, operating characteristics, technical manuals, specifications, parts lists and other technical data pertaining to all installed equipment and machinery, as well as the equipage and tools required to operate the ship and its equipment.

10.6.3 The COSAL is a supply management document that provides the supply officer the amount of material to stock in the storeroom and how much of each item of equipment must be carried aboard ship. Complete COSAL details are outlined in SPCCINST 4441.170A (NOTAL), COSAL Use and Maintenance Manual.

10.6.4 The inventory control points list all of the parts authorized to be stocked by the ship. This list is derived from the appropriate allowance parts lists (APL), allowance equipage lists (AEL) and the NAVAIRSYSCOM initial outfitting lists (IOL) into lists of spare parts to be stocked by the ship. The preparation of these lists takes into account the installed equipment on board, the quantity of each item of that equipment, the failure rate of parts, and the relative importance of these parts to the operation of the equipment.

a. An APL contains a detailed technical description of a particular piece of equipment and lists the parts that may be required to overhaul or repair it.

b. An AEL is a technical document prepared for various categories of equipment or mechanical, electrical or ordnance systems. When used for ALRE systems, the AELs include the items required for operation of the system and/or the repair parts required for maintenance.

10.6.5 COSAL maintenance includes reporting configuration changes, updating the ship's COSAL, processing various changes received (i.e., revised APL, monthly COSAL maintenance action reports), detecting/reporting inconsistencies between COSAL and COSAL-related subsystems and any other problem which adversely affects the shipboard maintenance effort. It is essential for each equipment/component installation, removal, or modification accomplished between regular overhaul to be promptly reported on a Ship's Configuration Change Form (OPNAV 4790/CK) per OPNAVINST 4790.4C, the Ships' 3-M Manual.

10.7 ALRE Inventory Control Points (ICPs)

10.7.1 NAVICP Philadelphia and Mechanicsburg are assigned responsibilities as PSICPs for aircraft launch and recovery equipment. In this capacity, NAVICP Philadelphia and Mechanicsburg are required to take necessary action to ensure availability of required spares/repair parts and support equipment for those systems under their cognizance. Program support requires that spares and repair parts required for equipment support be controlled by an inventory manager. NAVICP Philadelphia and Mechanicsburg will:

a. Prepare and maintain aircraft launch and recovery equipment support allowance lists.

b. Arrange for supply support with other inventory managers.

c. Perform provisioning developed by NAVAIRSYSCOM/ NAVSEASYSCOM/NAVSUPSYSCOM and implement ILS planning procedures.

d. Perform cataloging and determine packaging requirements.

e. Maintain technical and program support data provided by appropriate systems commands.

f. Budget and provide financial control of allocated resources.

g. Maintain, in coordination with NAVAIRSYSCOM, interim support arrangements for equipment until supply system support is available through scheduled provisioning actions.

h. Provide representation on the equipment maintenance reviews and Integrated Logistics Support Management Team (ILSMT) as required.

10.8 Operating Targets (OPTARs)

10.8.1 OPTARs are the lowest subdivision of funds in an operating budget. They can be issued by the following:

a. Expense limitation holders (type commanders) to ships, squadrons and units under their command.

b. Shore activities (responsibility centers) to departments or detachments.

c. Any other activity that is issued an operating budget and wishes to further subdivide it to the cost centers under its command.

10.8.2 TYCOMs are responsible for development of resource requirements, administration of available funds, and continuous analysis of status of OPTARs issued. Each ship issued an OPTAR is responsible for the efficient and effective use thereof. This includes accurate and timely accounting and reporting.

10.8.2.1 Detailed instructions for managing OPTARs are contained in Financial Management of Resources (Operating Forces) Fund Administration, NAVSUP P-3013-1 (NOTAL) and Financial Management of Resources (Operating Forces) Procedures, NAVSUP P-3013-2 (NOTAL).

10.9 Supply Reference Publications

10.9.1 Following are listed pertinent general use manuals, publications and directives which are utilized by supply personnel

to determine standard supply system operating procedures, and to obtain management data relative to material identification, material requisitioning, and processing of unserviceable repairable components:

a. FED LOG/HAYSTACK. This is a database of supply system information for the Federal Government. These programs include supplier names, addresses and phone numbers, as well as manufacturers information, part numbers, national stock numbers, ordering and pricing information for over 12 million supply items. This information is updated monthly and distributed on CDROM. Additionally these programs include:

(1) Section P2300, which lists repairable assemblies under cognizance of NAVICP Philadelphia and NAVAIRSYSCOM.

(2) Section P2310, designated to serve as master reference list for identifying and requisitioning all parts of replacement significance required to support repairable assemblies listed in Section P2300.

(3) Section P2320, which provides Source, Maintenance, and Recoverability Code Changes to inform field activities of approved changes in the recoverability (condemnation) levels on the items that call for retention, in lieu of disposal of these items.

b. Operating Procedures Manual for MILSTRIP/MILSTRAP (NAVSUP P-437) (NOTAL). This publication issues policy and procedures relative to the Military Standard Requisitioning and Issue Procedures and Military Standard Transaction Reporting and Accounting Procedures. This publication covers procedures relative to supply system management, requisitioning, inventory control, financial matters, material movement, and serves as a ready reference for personnel involved in preparation and/or processing of MILSTRIP documents.

c. List of Items Requiring Special Handling (LIRSH). The LIRSH is a microfiche publication that identifies items, by NSN, which require special handling procedures. Categories of such items include those that are hazardous, deteriorative in nature (shelf life controlled) and security classified.

d. Consolidated Remain-in-Place List (CRIPL) (NOTAL). The CRIPL is a microfiche publication that identifies those field and depot level repairable items that are authorized to remain in place until a serviceable item is received from supply. Normally, non-RFI repairable items must be turned into supply when the like item is placed on order. The CRIPL consists of three parts: NIIN sequence listing of all remain-in-place (RIP) items, part number to

NIIN listing, and discrete listing showing all RIP items in NIIN sequence.

e. Afloat Supply Procedures (NAVSUP P-485) (NOTAL). This publication establishes policies for operating and managing afloat supply departments. Much of the information applies to non-automated ships, but the procedures are applicable to all afloat supply activities and contain minimum essential procedures for acceptable supply management.

f. The Navy Stock List of Publications and Forms (CDROM NAVSUP PUB 600 (NLL)) contains publications and forms used on a repetitive basis throughout the Navy. It is available on the Naval Logistics Library website.

g. MILSTRIP/MILSTRAP Desk Guide (NAVSUP P-409) (NOTAL). This guide is published as a small handbook to serve as a ready reference for personnel responsible for originating and processing MILSTRIP and MILSTRAP documents. It contains common definitions and code structures used on a day-to-day basis.

SOURCE				MAINTENANCE				RECOVERABILITY/ PROGRESSIVE REPAIR		OPTIONAL SUPPLEMENTAL CODES	
				USE		REPAIR					
1ST POSITION		2ND POSITION		3RD POSITION		4TH POSITION		5TH POSITION		6TH POSITION	
P	PROCURE	A	REPLENISH	O	ORG	Z	NO REPAIR (CONSUMABLE)	Z	LEVEL INDICATED IN 3RD POSITION (CONSUMABLE)	1 2 3	THREE-DEGREE GAS TURBINE ENGINE REPAIR PROGRAM ITEM WITH FIRST-DEGREE IMA LEVEL (1) HAVING THE MOST CAPABILITY & THIRD-DEGREE IMA (3) HAVING THE LEAST
		B	INSURANCE								
		C	CURE-DATED								
		D	INITIAL (excluding SE))			O	ORG	O	ORG (FLR)		
		E	END ITEM USE STOCKED FOR INITIAL ISSUE	F	IMA AFLOAT	F	IMA AFLOAT	F	IMA AFLOAT (FLR)	6	"PA" ITEM WITH ORGANIC CAPABILITY FOR STOP GAP REQUIREMENTS
		F	SE NOT STOCKED	H	IMA ASHORE	H	IMA ASHORE	H	IMA ASHORE (FLR)	E	END TO END TEST REQUIRED BY IMA PRIOR TO BCM ACTION
		G	LIFE OF TYPE	G	IMA AFLOAT OR ASHORE	G	IMA AFLOAT OR ASHORE	G	IMA AFLOAT OR ASHORE (FLR)	N	"XB" ITEM TO BE PROCURED LOCALLY
K	REPAIR KIT COMPONENT	F D B	FILED (ORG/IMA) DEPOT BOTH O	L	SPECIALIZED IMA	L	SPECIALIZED	L	SPECIALIZED IMA (FLR) (CONNOTES PRIME IMA CONCEPT SEE APPENDIX D ENCL (2) NOTE IN INSTRUCTION)	P	PROGRESSIVE MAINTENANCE
M A	MANUFACTURE ASSEMBLE	O F H G D	ORG IMA AFLOAT IMA ASHORE IMA AFLOAT OR ASHORE DEPOT	D	DEPOT	D	DEPOT	D	DEPOT (DLR) (ORGANIC OR COMMERCIAL)	T J	"PD" TRAINING DEVICE ITEM ALL INTER-SERVICE DLR ITEMS WHICH NAVY AS SICA CONSIDERED FLR-IF ITEM IS UNDER THREE-DEGREE GAS TURBINE ENGINE REPAIR PROGRAM, APPLIES TO FIRST-DEGREE IMA LEVEL ONLY
	MISC	A	REQUEST NHA								
		B	OBTAIN FROM SALVAGE OR ONE TIME BUY	Z	NOT AUTHORIZED AT ANY LEVEL. ... UDRF ONLY WHEN REQUIRED FOR REFERENCE PURPOSES	B	NOT AUTHORIZED (RECONDIT- ION AT USER LEVEL)	A	SPECIAL HANDLING FOR DISPOSAL (CONSUMABLE)	8	SAME AS "J" EXCEPT APPLICABLE ONLY TO SECOND-DEGREE IMA LEVEL
		C	DIAGRAM/ SCHEMATICS/ INSTALLATION DRAWINGS							9	APPLICABLE AS "J" EXCEPT APPLICABLE ONLY TO THIRD DEGREE IMA LEVEL

Figure 10-1. Navy (Aviation) Application of Joint Service Uniform (SM&R) Codes

Chapter 11 - Quality Assurance

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Chapter 11

Quality Assurance

11.1 Quality Assurance

11.1.1 Quality Assurance (QA) is a planned and systematic pattern of actions necessary to provide confidence that an item or product conforms to established technical requirements.

11.1.2 The QA work center (W/C) is organized with a relatively small group of highly skilled personnel. These permanently assigned personnel, under the ALRE maintenance officer, are responsible for conducting and managing the QA program of the division. The maintenance personnel assigned to QA are known as quality assurance inspectors (QAIs). Additionally, personnel assigned to other work centers may be designated to perform certain inspection functions. Figure 11-1 depicts the standard ALRE QA W/C organization.

11.2 Concepts of Quality Assurance

11.2.1 The QA concept is fundamentally that of the prevention of the occurrence of defects. The concept embraces all events from the start of the maintenance operation to its completion and is the responsibility of all personnel. The achievement of QA depends on prevention, knowledge, and special skills. These factors are described as follows:

a. Prevention relies on the principle that it is necessary to preclude maintenance failure. This principle extends to safety of personnel, maintenance of equipment, and virtually every aspect of the total maintenance effort. Prevention is concerned with regulating events rather than being regulated by them.

b. Knowledge is derived from factual information. Data collection and analysis are a means of acquiring this knowledge.

c. Special skills, not normally possessed by production personnel, are required of a staff of trained personnel for the analysis of data and supervision of the QA program.

11.2.2 The terms inspection and audit, as used in this instruction have separate and distinct meanings and should be used accordingly. The following definitions are provided to clarify the conceptual differences in these terms:

a. Inspection is the examination/testing of supplies (including raw materials, documents, data, components, and

assemblies) and services to determine whether they conform to technical requirements.

b. Audit, as it applies to the QA program, is a periodic or special evaluation of details, plans, policies, procedures, products, directives, and records.

11.2.3 The QA program provides a systematic and efficient method for gathering, analyzing, and maintaining information on product quality and on the source and nature of defects and their impact on the current operation. It permits decisions to be based on facts rather than intuition or memory. It provides comparative data which will be useful long after the details of the particular time or events have passed. Its objective is to readily pinpoint problem areas in which management can:

a. Improve the quality, uniformity, safety, and reliability of the total maintenance effort.

b. Improve the work environment, tools, and equipment used in the maintenance effort.

c. Eliminate unnecessary man-hour and dollar expenditures.

d. Improve training, work habits, and procedures of maintenance personnel.

e. Increase the accuracy and value of reports and correspondence originated by maintenance personnel.

f. More effectively disseminate pertinent technical information.

g. Establish realistic material and equipment requirements in support of the maintenance effort.

h. Support the foreign object damage (FOD) prevention and other special programs.

11.2.4 Teamwork must be achieved before benefits can be obtained from a QA program. Each individual in the organization must use critical judgment in the course of their daily work. Judgment plays a vital part in the quality of the work performed. QA techniques supply each person, from the worker to the commanding officer, with information on actual quality standards, goals, and achievements. The resultant recorded knowledge can encourage the best efforts of all personnel.

11.3 Responsibility for Quality in Maintenance

11.3.1 The commanding officer is ultimately responsible for the inspection and quality of material under his or her cognizance. Command policy and emphasis will establish high standards of quality in a maintenance organization.

11.3.2 Attaining quality in maintenance and the prevention of maintenance errors is an all hands task that can only be accomplished through positive leadership, proper organization, and a complete understanding of responsibilities by each individual in the division. The QA program requirements, as well as QA functions and responsibilities stipulated in this instruction, provide a sound basis for conducting an effective ALRE QA program.

11.3.3 QA is a staff function, which requires both authority and assumption of responsibility. Direct liaison between QA and the work centers is a necessity and must be energetically exercised. Although the QA supervisor is responsible to the ALRE Maintenance Officer for the overall quality of maintenance within the division, work center supervisors are responsible for ensuring that required inspections are conducted and that quality workmanship is attained. The foremost responsibility of the ALRE QA program is the assurance of proper maintenance actions.

11.4 Quality Assurance Responsibilities

11.4.1 Specific program responsibilities assigned to the QA supervisor are to:

a. Maintain the central technical publications library for the division, including technical directives (TDs); control classified technical publications for the division and ensure that each work center receives all publications that are applicable and that they are kept current and complete.

b. Establish qualifications/requirements for QAIs/CDQAIs (collateral duty quality assurance inspectors) and CDIs (collateral duty inspectors); review the qualifications of personnel nominated for these positions, and endorse nominations to the commanding officer and air officer via the chain of command. A current list of all QAIs/CDQAIs and CDIs will be issued to all W/Cs and include the type of equipment each may inspect.

c. Recheck qualifications of CDIs by monitoring them at a minimum quarterly during scheduled or unscheduled maintenance tasks. Documentation of monitoring must be retained for a period of 2 years within the QA Branch.

d. Ensure all work guides, check-off lists, check sheets, MRCs, etc. used to define/control maintenance, are complete and current prior to issuing to crews/individuals.

e. QA shall monitor and review all Requests for Departures from Specifications, Requests for Engineering Information (REIs), Hazardous Material Reports (HMRs), Technical Publications Deficiency Reports (TPDRs), Quality Deficiency Reports (QDRs), Engineering Investigation Request (EIs), to ensure that they are accurate, clear, concise, and comprehensive prior to submission.

f. Monitor use of PME to ensure compliance with calibration intervals and safety instructions.

g. Perform inspection of all maintenance equipment and facilities to ensure compliance with fire and safety regulations and existence of satisfactory environmental conditions. Additionally, monitor proper training, qualification, and licensing of equipment operators and drivers.

h. Provide a continuous training program in techniques and procedures pertaining to the conduct of inspections. When directed or required, provide technical task forces to study trouble areas and submit recommendations for corrective action.

i. Use information from the ALRE Maintenance Action Form (MAF) in developing discrepancy trends to identify failure areas or other maintenance problems.

j. Review periodic inspection records, and note recurring discrepancies requiring special action.

k. Maintain liaison with TYCOMs, Naval Air Warfare Center Aircraft Division (NAVAIRWARCENACDIV) Lakehurst, Carrier and Field Service Unit (CAFSU), and other available field technical services. Establish and maintain liaison with other maintenance and rework activities to obtain information on ways for improving maintenance techniques, quality of workmanship, and QA procedures.

l. Ensure personnel performing QA functions use inspection equipment such as mirrors, magnifying glasses, comparators, tensiometers, pressure gauges, etc., as required. Ensure that maintenance personnel have such equipment available, in operating condition and calibrated.

m. Ensure that established standard procedures are observed for conducting PMS actions.

n. Ensure that the configuration of equipment and components is such that all essential modifications have been incorporated. This requires checking equipment records with the current service bulletin and services change Zero Bulletin, Ships Equipment File (SEF) which provide required configuration information.

o. Ensure an inspection is conducted on all equipment received for use, returned for repair, or held awaiting repair to verify its material condition, identification, packaging, preservation, and configuration are satisfactory; and when applicable, that shelf-life limits are not exceeded.

p. Ensure that prior to the installation of an ALRE component, part and contract numbers are validated against the I/DPL database to ensure the installation of non-discrepant parts. Also ensure that contractor, VRT personnel, and all repair activities are briefed on and utilize the ALRE I/DPL Program. Ensure maintenance documentation (e.g., MAF) procedures support the program objective.

NOTE

The ALRE MO shall approve an entry of UNKNOWN for the contract number.

q. Review all incoming technical publications and directives to determine their applicability to the division.

r. Prepare or assist in the preparation of Maintenance Instructions (MIs) to ensure that QA requirements are included.

s. Develop and administer appropriate tests for QA nominees. Ensure currency and integrity of all testing materials.

t. The QA supervisor is assigned the overall responsibility for the division safety program as outlined in paragraph 11.9.3.1.

11.4.2 To comply with assigned responsibilities, QA will perform the inspections identified in the following paragraphs:

11.4.2.1 Mandatory QA inspections as specified in the MRCs, TDs, and MIs.

11.4.2.2 Those inspections required to be conducted by QA personnel during/upon the completion of a maintenance action.

11.4.2.3 ALRE Quality Assurance Cards are provided for certain preventive and corrective maintenance tasks that, if improperly performed, could cause equipment failure or jeopardize the safety

of personnel. They contain guidelines for conducting QA inspections. QAI level inspections are performed during/after task performance, using the following criteria:

a. If the proper performance of a task cannot be determined after the task is completed, a QA inspection shall be required while the task is being performed. Work shall not proceed past the inspection point indicated on the task MRC until the QA inspection has been completed. For these inspections, the notation QA REQUIRED appears on the MRC containing the task.

b. If the proper performance of a task can be determined by a visual inspection after the task is completed, a QA inspection is required after the task completion.

11.4.2.3.1 QA cards shall be maintained and used by QA personnel. Upon receipt of a new QA card, the enclosed feedback form shall be filled out and forwarded to NAVAIRWARCENACDIV Lakehurst to acknowledge receipt of the card(s). Additionally, fleet units shall send a feedback report, indicating receipt, to their respective TYCOM (COMNAVAIRLANT (Code N433) or COMNAVAIRPAC (Code N435)).

11.4.2.3.2 Recommended changes/corrections shall be reported by CAT I or CAT II ALRE TPDR in accordance with paragraphs 11.10.5.2 and 11.14.1.3.

11.4.2.3.3 NAVAIRWARCENACDIV Lakehurst (Code 3.3.1) will manage the ALRE QA MRC program and issue cards annually and as they are updated.

11.4.3 Procedures shall be established within each work center to ensure that the QA inspection requirements are complied with during all maintenance evolutions. In developing procedures, inspections normally fall into one of the following categories:

a. Receiving or screening inspections apply to material, components, parts, equipment, logs/records, and documents. These inspections are normally conducted by CDIs to determine the condition of material, proper identification, maintenance requirements, disposition, and correctness of accompanying records, documents, etc.

b. In-process inspections are specific QA functions that are required during the performance of maintenance requirements/actions in cases where satisfactory task performance cannot be determined after the task has been completed. These inspections, when designated, include witnessing application of

torque, functional testing, adjusting, assembly, servicing, installing, etc.

c. Final inspections are specific QA functions performed following the completion of a task or series of tasks.

d. In-process and final inspections are normally conducted by CDIs, however, QAIs shall conduct in-process and final inspections of all tasks on all which require the equipment to have a functional check. Additionally, QAIs will perform inspections of any other tasks as determined by the ALRE maintenance officer. It must be emphasized that only those personnel designated as QAI/CDQAIs and CDIs are authorized to sign as inspector for a QA inspection requirement. While not all QA inspections conducted during the various phases of maintenance require a signature, all specified QA inspections are conducted, witnessed or verified by designated QA personnel.

11.4.4 The INSPECTED BY block on all MAFs are signed by QA inspectors. Only the QA inspector(s) actually inspecting the work for proper standards will sign inspection documents.

11.4.5 Billet descriptions shall be prepared for QA personnel to ensure that all QA functions and responsibilities are assigned. Billet descriptions shall assign specific programs that are managed and monitored by each QA.

11.5 Quality Assurance Inspectors

11.5.1 QAIs perform the following functions:

a. Review incoming technical publications and directives to determine their application to the division.

b. Prepare or assist in the preparation of MIs to ensure QA objectives and requirements are defined.

c. Participate as members of technical task forces to investigate trouble areas and provide recommendations for corrective action.

d. Verify the certification of maintenance personnel; i.e., welder, tow tractor, or forklift.

e. Review qualifications of personnel nominated to become CDIs (or CDQAIs) and provide recommendations as appropriate.

f. Assist in the preparation of ALRE Discrepancy Reports (see paragraph 11.10.3), PMS Feedback Reports, and change

recommendations to technical manuals. Review all report entries for adequacy and correctness prior to distribution.

g. Provide technical assistance to CDIs and maintenance personnel who are required to make decisions concerning QA.

h. Review ALRE Discrepancy Reports, PMS Feedback Reports, and change recommendations to technical manuals to determine discrepancy trends and specific problem areas relative to their areas of responsibility.

i. Conduct in-process and final inspections of tasks that require certification by QAIs/CDQAIs (e.g., functional check of A/G). Ensure that each QA inspection includes an examination of the work area for sources of potential FOD.

j. Monitor calibration status of equipment/tools in work centers.

k. Develop discrepancy trends and such charts/graphs that are necessary to depict quality performance.

l. Maintain liaison with TYCOM, NAVAIRWARCENACDIV Lakehurst, CAFSU and other field technical services. Establish and maintain liaison with other maintenance and rework activities to obtain information for improving the maintenance techniques, quality of workmanship, and QA procedures.

m. Develop checklists for auditing work centers, specific maintenance programs, and processes that require monitoring by QA.

NOTE
No QAI may inspect his/her own work and sign as an inspector.

11.5.2 All personnel being considered for selection as QAIs should meet the following qualifications:

a. Be senior in grade and experience, at paygrade E-6 or above, with a well-rounded maintenance background. See paragraph 11.6.2 for additional information.

b. Have fully developed skills and experience and be technically qualified in fields under their cognizance.

c. Be able to research, read, and interpret drawings, technical manuals, and directives.

d. Be able to write with clarity and technical accuracy.

e. Be stable and excellent in performance.

f. Be motivated and have personal desire to acquire greater knowledge of their technical specialty.

g. Be observant, alert, and inquisitive.

h. Ability to work with others.

i. Successfully qualify by passing a test administered by the QA branch.

11.5.3 The QA supervisor shall ensure that personnel assigned to perform QA functions receive continuous training in inspecting, testing, and quality control methods specifically applicable to their area of assignment. They will also ensure that QAIs receive cross training to perform those QA functions not in their assigned area. This training should include local training courses, on-the-job training (OJT), rotation of assignments, and Personnel Qualification Standards (PQS). QAIs shall have successfully completed the NAMTRAGRUDET (Norfolk and San Diego) ALRE Quality Assurance Administration course (C-670-2017).

11.5.4 QAIs shall be designated in writing by the Commanding Officer. The ALRE Quality Assurance Inspector Recommendation/ Designation Form (figure 11-2) shall be used for this purpose.

11.6 Collateral Duty Quality Assurance Inspectors (CDQAIs)

11.6.1 When shortages of skills or manpower preclude the assignment of a QAI, a qualified individual within an appropriate work center may be designated a CDQAI. CDQAIs must meet the same criteria as QAIs, including designation in writing by the Commanding Officer, and will have the same authority as QAIs, but remain part of the work center organization. CDQAIs are primarily assigned to meet duty and/or in-port workload requirements, and are not assigned specific responsibility for programs monitored/managed by QA. CDQAIs shall perform QAI-level inspections only when tasked to do so by the ALRE maintenance officer, Maintenance Control Supervisor or QA Supervisor. Tasking shall be limited to specific maintenance events.

NOTE

No CDQAI may inspect his/her own work and sign as an inspector. No CDQAI may perform in a QA capacity and also sign as the W/C supervisor on the same job.

11.6.2 Should it become necessary to assign an individual below the grade of E-6 as a CDQAI to cover a given skills/manpower shortfall

a letter shall be submitted to the respective Type Commander requesting approval. Comprehensive information surrounding the shortfall and complete justification must be provided. Assignment of an individual below the grade of E-6 as a CDQAI shall not normally exceed a period of 90 days, however Type Commanders may, at their discretion, approve greater time periods. These occurrences might be necessary to coincide with availabilities that exceed 90 days. The authorized period will commence on the date of the official correspondence response from the TYCOM, unless otherwise stated in said correspondence. In no case shall an individual below the grade of E-5 be appointed as a CDQAI.

11.7 Collateral Duty Inspectors (CDIs)

11.7.1 CDIs assigned to the work centers are to inspect all work and comply with the QA inspections required during all maintenance actions performed by their respective work centers. They will be responsible to the QA supervisor when performing these functions. CDIs will check all work in progress, and will be familiar with the provisions and responsibilities in the various programs managed and monitored by QA.

NOTE

No CDI may inspect his/her own work and sign as an inspector. No CDI may perform in a QA capacity and also sign as the W/C supervisor on the same job.

11.7.2 QA will establish minimum qualifications for personnel selected for CDI. Work center supervisors are responsible for ensuring that sufficient qualified personnel are nominated for CDI to comply with QA inspections required during all maintenance actions. Due to the critical role of the CDI, it is imperative that branch officers, group and work center supervisors carefully screen all candidates for these assignments. CDIs will be required to be PQS qualified and to demonstrate their knowledge and ability on the particular type equipment by successfully passing a test that is locally prepared and administered by QA.

11.7.3 CDIs shall be designated in writing by the air officer. The ALRE Quality Assurance Inspector Recommendation/Designation Form (figure 11-2) shall be used for this purpose.

11.8 Quality Assurance Programs

11.8.1 The QA Management Program includes continuous collection and distribution to cognizant personnel of all messages, letters, instructions, and other information concerning programs being managed. Programs assigned to QA for management include, but are not limited to:

a. QA audit program.

b. Technical Publication Library (TPL).

c. Safety programs including electrical safety.

d. Foreign Object Damage (FOD).

e. Tag Out Program.

f. Calibration Program.

g. Tool Control Program.

h. QA Standards and Qualification Program.

11.8.2 MIs shall be prepared to carry out internal procedures and methods of administering specific programs and processes assigned for management. MIs are used to issue technical information and local policy of a sustaining nature. They direct efforts of QAIs, CDQAIs, CDIs, and other maintenance personnel. MIs shall be prepared in standard Navy directives format as prescribed in SECNAVINST 5215.1C. A sample of the format is in figure 11-3.

11.8.3 QA shall prepare an audit MI which describes the specific functions required to monitor each of the QA managed programs. Checklists used to monitor/audit work centers and maintenance programs shall be included as part of the MI governing that program. The QA supervisor is responsible for ensuring that all appropriate QA elements are included in these instructions, including the applicable audit checklist. Audits are one of the tools used in program however, continuous attention is required to effectively manage program performance.

11.8.4 The originals of all MIs will be maintained in the CTPL. A numbering system shall be established to provide file control (e.g., 1-01, 2-01). A master MI list shall be prepared and maintained by the central TPL. It shall include the MI number, title, effective date, and latest change date (if any). A copy of this list shall be held by each work center, and updated every 90 days.

11.8.5 MIs shall be reviewed for currency/validity on their anniversary date. The review shall be conducted jointly by the cognizant work center and QA.

11.9 Quality Assurance Program Management

11.9.1 Quality Assurance Audits. QA audits are essential elements of an effective QA program. Audits provide an evaluation of performance and program compliance throughout the division. They serve as an orderly method of identifying, investigating, and correcting deficiencies on a scheduled and unscheduled basis. Audits are also used to monitor those specific maintenance programs and processes assigned to QA for management.

11.9.1.1 Audits fall into the following three categories:

a. Work center audit.

b. Special audit.

c. Type Commander audit.

11.9.1.2 Work center audits are conducted quarterly to evaluate the overall quality performance of each work center. As a minimum, the following applicable items are evaluated:

a. Personnel and skills.

b. Technical publications.

c. Maintenance Instructions (MIs).

d. Adherence to directives, procedures, and inspections.

e. Adequacy and availability of process, test, and inspection procedures.

f. Availability and calibration status of precision measuring equipment (PME).

g. Proper use of PME.

h. Certification of personnel performing special processes such as welding, etc.

i. Handling, packaging, protection, and storage of material.

j. Cleanliness and condition of spaces.

k. Compliance with fire, safety and electrical safety regulations.

l. Configuration of components, equipment, and accuracy of associated logs and records.

m. Equipment logs and records.

n. Material condition/Corrosion Control of equipment.

o. FOD Prevention Program compliance.

p. Tool Control Program compliance.

q. TAG OUT Program compliance.

11.9.1.3 Special audits are conducted to evaluate specific maintenance tasks, processes, procedures, and programs. These audits provide a systematic, coordinated method of investigating known deficiencies, evaluating the quality of workmanship, and determining the adequacy of and adherence to applicable technical publications/instructions. The conduct of special audits is normally directed by the ALRE maintenance officer or QA supervisor on an as required basis.

11.9.1.4 Audit forms for each work center, with appropriate checklists, are developed by QA.

11.9.1.5 Upon completion of an audit, the findings are reviewed with the work centers involved and a report of the findings, with recommendations when required, are submitted to the MO. Records of audits are maintained for 2 years in accordance with SECNAVINST 5212.5D.

11.9.1.6 Adequate follow up procedures shall be established to ensure that discrepancies found during a QA audit are resolved. Attention from all levels within the V-2 division organization is essential.

11.9.1.7 Type Commander ALRE Maintenance Management Teams will visit each ship at least once during the work-up cycle and will audit the ALRE QA program prior to deployment.

11.9.2 Technical Publications Library (TPL) The TPL serves two important functions. It provides a central source of up-to-date information for the use of all personnel in the performance of their work, and it is an excellent source of reference information to facilitate personnel training and individual improvement. To perform these functions properly, the TPL must contain at least one copy of all publications affecting the assigned equipment.

11.9.2.1 Management of the TPL is a function of QA. This

function includes the determination of technical manuals, interim rapid action changes (IRACs), rapid action changes (RACs), repair procedures, technical directives, etc., required to support the division, receipt and distribution control of these manuals, as well as the responsibility for ensuring manuals are updated throughout the division. Detailed information for establishing and operating a TPL are contained in NA 00-25-100 (NOTAL).

11.9.2.2 Each activity that has established a TPL shall designate a Central Technical Publications Librarian (CTPL). Personnel assigned as the CTPL must receive indoctrination and continious training in library operation. This training includes OJT as well as formal schooling.

11.9.2.3 Each work center that contains a dispersed library shall assign a dispersed Technical Publication Custodian (DTPC) who will be responsible for the storage, update and user availability of the publications issued to them. The training of DTPCs is a responsibility of the Central Technical publications Librarian and the work center supervisor/Division Officer. Each DTPC shall be recommended jointly by the appropriate work center supervisor/Division Officer and designated in writing by the ALRE Maintenance Officer.

11.9.2.4 For continuity, effective operation and adequate training, personnel assigned to the CTPL should be retained in the billet a minimum of 1 year. Additionally, personnel assigned as a DTPC should be retained for a minimum of 6 months.

11.9.2.5 When an activity is unable to locate the applicable COMNAVAIRSYSCOM approved technical publication, or concludes that such a publication does not exist, that activity shall send an assistance request letter, via the chain of command, to: Commanding Officer, Naval Air Technical Data and Engineering Service Command (NATEC), Code 3.3.A, San Diego, CA 92135-7031, with a copy to COMNAVAIRSYSCOM (PMA251) and NAVAIRWARCENACDIV Lakehurst (Code 3.3.1). In addition to a brief explanation of the problem, previous resolution attempts, and a point of contact, the following information shall be included if applicable:

a. Item nomenclature

b. Part number (P/N)

c. National stock number (NSN)

d. Applicable ALRE system application

e. Serial number.

f. Manufacturer's name or the contractor and government entity (CAGE) code

g. Identification of the next higher assembly (for example, nomenclature, P/N, NSN)

11.9.2.6 NATEC shall respond directly to the originator, with copies to other involved commands, within 30 calendar days of receiving the request for assistance.

11.9.2.7 Technical Directives (TDs) provide information on the proper administration, technical and/or operational use of equipment. TDs also provide technical alteration specifications to install, remove, reconfigure, and repair equipment. The applicable Zero Dash bulletins provide a complete numerical index and current status of the TDs.

11.9.2.8 Detailed information concerning the ordering of technical publications and TDs is contained in NA 00-25-100 (NOTAL). Requisitions are submitted to the appropriate inventory control point listed in the Navy Stock List of Publications and Forms (NAVSUP P-2002) (NOTAL).

11.9.3 Division Safety Program. This program seeks to identify and eliminate hazards wherever and whenever they are found. Effectiveness and safety result when properly trained personnel use properly designed equipment in accordance with established procedures under competent and persistent supervision. It requires active daily participation by all personnel to obtain desired results. Any safety program must address the aviation, shipboard, and industrial aspects of safety.

11.9.3.1 The QA supervisor is assigned the overall responsibility for the V-2 division safety program. The intent of this program is not to conflict with any portion of the ship's overall safety program but to assist in the coordination of the total safety effort. The following responsibilities are included:

a. Disseminating appropriate safety posters and literature.

b. Reporting any hazards, mishaps, and unsafe practices in the division.

c. Conducting training and safety meetings within the work centers.

d. Coordinating with the ship's safety officer.

e. Participating in the ship's safety surveys and stand-downs.

11.9.4 Foreign Object Damage (FOD) Program. QA will ensure that:

a. There is compliance with all instructions pertaining to FOD prevention issued by the FOD prevention officer.

b. All work centers have instituted procedures that comply with applicable instructions and the FOD prevention/safety relationship is adequately addressed. Evaluation of FOD prevention measures shall be included in all special and planned work center audits.

c. Maintenance methods and procedures support the FOD prevention program.

d. The ship's FOD prevention officer, the aircraft handling officer (ACHO), is made aware of FOD related problems.

e. Contractor/field maintenance teams are briefed regarding the command's FOD prevention program requirements and that discrepancies are to be reported to the FOD prevention officer.

11.9.5 Tag Out Program. QA will ensure that:

a. Tag-out procedures are verified in accordance with current directives.

b. All work centers have instituted procedures that comply with OPNAVINST 3120.32C and other applicable instructions are adequately addressed.

11.9.6 Calibration Program.

During daily walk-throughs, routine audits, and while conducting inspections of all maintenance actions, QA will verify that all equipment/components are in calibration and are in safe working condition. QA will ensure that cognizant work centers comply with procedures established for the induction of equipment/components that require calibration.

11.9.7 Tool Control Program. QA will ensure that:

a. Tool control procedures are verified as directed by the ALRE Maintenance Officer and during work center audits.

b. When work is to be performed by contractor/field maintenance teams, the division's tool control standard is

maintained. A QAI will brief them upon their arrival regarding tool control responsibilities.

11.9.8 Quality Assurance Standards and Qualification Program. To maintain proper quality inspections of maintenance, inspectors must be trained, tested and indoctrinated with the highest of standards. All personnel nominated to perform inspection of ALRE Maintenance must meet the requirements specified in paragraphs 11.5.2, 11.5.3, and 11.7.3.

11.9.8.1 The TYCOM standardized ALRE Job Qualification Requirements (JQR) for QAI, CDQAI and CDI will be utilized to assist in the effective and proper qualification of ALRE inspectors. Quality inspections require an aggressive continuous training program to ensure inspectors maintain quality in maintenance and prevention of maintenance errors.

11.10 ALRE Discrepancy Reporting Program

11.10.1 Introduction

a. This program is the method by which hazardous deficiencies in material and publications, substandard workmanship, and improper QA procedures are reported.

b. COMNAVAIRSYSCOM has provided a NAVAIR EI website enabled capability to Organizational level and Intermediate level maintenance activities to create, transmit, and track Engineering Investigation (EI) requests and Hazardous Material EI requests. Requests will be routed to the assigned Fleet Support Teams (FSTs) and automatically routed to other concerned activities. This NAVAIR EI website enabled capability also permits maintenance activities to receive reports and other information, conduct technical dialog with the FST technical representative, and verify status of an EI. This website is accessible at https://ei.navair.navy.mil by all organizations with a role in the EI process.

c. COMNAVAIRSYSCOM has also established an Engineering Investigation (EI) Clearinghouse to oversee the EI process and interface between the EI requesting activity and the Fleet Support Teams (FSTs) for all COMNAVAIRSYSCOM activities. The function of the Clearinghouse is to monitor the performance of the EI process, and assist Fleet activities resolve problems with specific engineering investigations. The Clearinghouse will operate up to 16 hours each working day to respond to or expedite solutions to fleet problems or concerns. The Clearinghouse personnel can be contacted through the NAVAIR EI website at https://ei.navair.navy.mil.

d. It is the policy of this program to expeditiously resolve reported discrepancies relating to ALRE equipment. By utilizing prepaid commercial express shipping, EI exhibits can usually be delivered to the investigation activity within 3 days CONUS and 7 days non-CONUS.

11.10.2 Exceptions to the ALRE discrepancy reports are:

a. Changes or corrections to carrier Naval Air Training and Operating Procedures Standardization or tactical manuals are reported in accordance with OPNAVINST 3710.7R (NOTAL) using OPNAV 3710/6.

b. Deficiencies resulting from incorrect packaging, preservation, marking, handling (as reported by supply activities), or deficiencies in shipment which are the result of overage, shortage, expired shelf life, or misidentified material, are reported in accordance with SECNAVINST 4355.18 (NOTAL).

c. Locally procured material found to be deficient by the procuring activity or station is reported in accordance with SECNAV 4855.3A.

d. Deficiencies in letter type instructions and notices are reported by letter to the sponsor.

e. Incorrect source, maintenance, and recoverability (SM&R) codes are reported in accordance with NAVAIRINST 4423.11 (NOTAL).

f. Recommendations for improvements in procedures which are not a result of incorrect information contained in publications are reported by letter to Naval Air Technical Data and Engineering Service Command (NATEC) Code 3.3.A. Provide an info copy to NAVAIRWARCENACDIV Lakehurst, Code 3.3.1.

11.10.3 Program Management

11.10.3.1 QA is responsible for managing the ALRE Discrepancy Reporting Program. Reports covered by this program are the ALRE Quality Deficiency Report (QDR), ALRE Hazardous Material Report (HMR), ALRE Engineering Investigation (EI) Request, and ALRE Technical Publications Deficiency Report (TPDR). QA will assist the work centers in determining if one or more reports are needed for any maintenance problem or situation occurring in the activity. They will also review all discrepancy reports to ensure they are accurate, clear, concise, and comprehensive prior to submission.

11.10.3.2 The ship's safety officer shall review all correspondence pertaining to ALRE-related aircraft, ground, flight, and flight related mishaps.

11.10.3.3 Correspondence, reports, or requests involving the management of ALRE discrepancy reports shall be reviewed by the ALRE Maintenance Officer.

11.10.4 Safety

11.10.4.1 All hands have a responsibility to be alert for defects and discrepancies having an adverse effect on safety and to properly report them via their chain of command.

11.10.4.2 Safety shall be the primary consideration when submitting the reports outlined in this chapter. If an incident meets the criteria for an ALRE HMR and an ALRE EI, the hazard and the EI request should be reported in a single priority request on the NAVAIR EI website or a single priority message. Submission through the NAVAIR EI website is preferred and should be utilized when accessible. If a Technical Publication Deficiency Report meets the criteria for a CAT I TPDR, it should be reported via priority message.

11.10.5 Reporting Procedures

11.10.5.1 Submit ALRE QDRs, ALRE HMRs, ALRE EI requests and all combination ALRE discrepancy reports via the NAVAIR EI website to NAVAIRWARCENACDIV, Lakehurst, the Fleet Support Team (FST) for ALRE. If submitting by naval message, submit to AIG ONE THREE EIGHT EIGHT FIVE. In the remarks section of the message state, “THIS MSG ACTION FOR NAVAIRWARCENADLKE. INFO ALL OTHERS.” AIG ONE THREE EIGHT EIGHT FIVE shall not be used in the info addressee line of the message.

NOTE

Submission of an ALRE Discrepancy Report is mandatory when the criteria of paragraph 11.11.2.1, 11.12.3.1, 11.13.3, or 11.14.1.1 is met. A Casualty Report (CASREP) may be required in addition to an ALRE Discrepancy Report, but not in lieu of it.

11.10.5.2 Submit CAT I ALRE TPDR messages to AIG ONE THREE EIGHT EIGHT FIVE and NAVAIRTECHSERVFAC (NATEC) (Code 3.3.A) for dual action. AIG ONE THREE EIGHT EIGHT FIVE shall not be used in the info addressee line of the message. Submit CAT II ALRE TPDRs (OPNAV 4790/66) to the NAVAIRTECHSERVFAC (NATEC)(Code 3.3.A) and with an info copies to the originator's type commander and the FST.

NOTE

For ALRE TPDRs involving ALRE QA cards, NATEC will not be a recipient of the report. The report action addressee will be NAVAIRWARCENACDIV Lakehurst (Code 3.3.1).

11.10.5.3 A report control number (RCN) will be assigned to each ALRE discrepancy report. RCNs will be assigned sequentially throughout the calendar year, without regard for the type of report: for example, 8001 is the first report and is an ALRE HMR, 8002 is the second report and is a CAT I ALRE QDR, 8003 is the third report and is an ALRE TPDR, and 8004 is the fourth report and is another ALRE HMR. The RCN shall not contain any hyphens or spaces; for example, V03300018001. The RCN is composed of the following elements:

a. Element (1) is the service designator code applicable to the originating activity, either R or V. These codes are the only correct service designator codes for ALRE Discrepancy Reports. V is for Navy and Marine Corps aviation Atlantic Fleet operating forces, and R is for Navy and Marine Corps aviation Pacific Fleet operating forces.

b. Elements (2) through (6) are the unit identification code (UIC) of the originating activity, for example 03300.

c. Elements (7) and (8) are a two character identification of the calendar year, for example, 01.

d. Elements (9) through (12) are the locally-assigned control number. These numbers are sequential beginning with 8001 each calendar year.

11.10.5.4 Reference the RCN and message date-time-group of the originating activity on all supplemental correspondence. Include shipping information and the exhibit control number assigned by the FST.

11.10.5.5 Retain a copy of the reports for 2 years in accordance with SECNAVINST 5212.5D.

NOTE

ALRE HMRs, ALRE TPDRs, ALRE QDRs, ALRE EI requests and combined reports prepared as a result of an aircraft mishap are not privileged. Exercise extreme care to ensure that these reports and requests do not contain privileged information. Refer to OPNAVINST 3750.6Q (NOTAL).

11.10.5.6 ALRE discrepancy report submission criteria, precedence, and time limits are summarized in Figure 11-15.

11.10.6 Handling and Preparation of ALRE QDR/HMR/EI Material.

11.10.6.1 The V-2 (ALRE) material control work center will hold the defective material until disposition instructions are received from the Fleet Support Team (FST) or directing authority. When disposition instructions are received from the FST, V-2 (ALRE) material control shall take the defective material to the supporting supply department for shipping.

NOTE

Defective material investigations are often closed without reaching a conclusion about why the component failed because the exhibit is lost prior to shipment or damaged due to improper handling or packaging.

NOTE

Any material directed by the FST to be released to an authorized contractor's representative or shipped directly to a contractor's plant shall be processed through the supporting supply department. Supply can issue the material on a custody basis, only after receiving authority from the FST.

a. Maintain material in an AS IS condition, ensuring the ALRE EI exhibit control number assigned by the FST appears on all documents, exhibits, and packaging. Whenever a hazardous condition is evident, request shipping instructions from the FST.

b. Take special care to cap/package material immediately upon removal from the system in such a manner as to prevent corrosion, contamination, or other damage that may contribute to confusion or loss of possible cause factors. Do not attempt any adjustments, disassembly, or perform any type of cleaning, externally or otherwise. If any adjustment, disassembly, or cleaning was done during a local investigation, a list of particulars describing the local investigation must accompany the material to the FST.

c. Forward samples of the fluid in clean, sealed, authorized containers. If contamination is suspected, annotate sample bottles accordingly.

NOTE

Hazardous material should be handled/packaged in accordance with OPNAVINST 5100.23E. Contact the supporting supply department for assistance.

d. Do not attempt to reassemble fragments of failed material. Wrap each fragment separately to prevent damage caused

by relative movement. When feasible, forward associated accessories, components, or material suspected of contributing to the malfunction/mishap. Do not touch failed surfaces as this could mask failure data.

e. Ensure DD Form 2332 (figure 11-16) is attached to the exhibit. Also, provide a copy of the ALRE MAF (if applicable), appropriate copies of DD Form 1149 with a copy of the ALRE Discrepancy Report and all other supporting documents inside of the shipping container. QA shall ensure the ALRE MAF is marked with the ALRE exhibit control number assigned by the FST and that ALRE QDR, ALRE HMR or ALRE EI, as appropriate, appears in 3 inch red letters, in a manner not to obscure vital data.

NOTE

Exhibits shall be held 60 days by the originating point or until disposition instructions are received from an appropriate screening or action point. If after 60 days, shipping or disposition instructions have not been received, the originator shall conduct a follow-up with the appropriate screening or action point. Exhibits shall not be repaired within the 60-day holding time unless critical mission requirements dictate. In such instances, action should be initiated to retain evidence of the deficiency through photographs, testing, etc., which can be included with the ALRE discrepancy report.

NOTE

Within 45 days after receipt of an ALRE discrepancy report, the ALRE screening activity shall provide feedback to the originating activity concerning status of any possible exhibit request. Feedback shall delineate any requirement for the originator to hold the exhibit material for a period exceeding the initial 60 days.

11.10.7 Response to ALRE Discrepancy Reports

11.10.7.1 The originating point is an activity that finds a quality deficiency and reports it by ALRE QDR, ALRE HMR, ALRE HMR/EI, or ALRE TPDR to the designated screening point. Figure 11-4 depicts the process flow for ALRE QDRs. Processing for other ALRE discrepancy reports is similar.

a. Defective material identified by an ALRE discrepancy report, shall be isolated and held as an exhibit for a minimum of 60 days (unless otherwise directed) after the report is submitted to the screening point.

b. The originator shall respond to all requests from screening, action or support points for additional information that

may be necessary in the investigation of any ALRE discrepancy reports.

c. When a reply has not been received within the timeframes specified in paragraphs 11.11 through 11.14 for the applicable discrepancy report, the originating activity's ALRE QA will initiate follow-up action to the screening point via the NAVAIR EI website, priority message, routine message or naval letter, as appropriate. Submission through the NAVAIR EI website is preferred and should be utilized when accessible. At a minimum, information addressees/"copies to" for follow-up action will include COMNAVAIRSYSCOM (PMA251), COMNAVAIRLANT (Code N433), and COMNAVAIRPAC (Code N435).

11.10.7.2 The screening point is the activity that reviews the discrepancy report for proper category classification, validity, correctness of entries, accuracy, and completion of information addresses; determines and transmits the report to the cognizant action point; maintains an audit trail for each report; reviews QDR closeout responses from action points; and collects, maintains, and exchanges report data. The primary screening point for ALRE equipment is the ALRE FST, NAVAIRWARCENACDIV Lakehurst, NJ. The screening point for NAVAIRSYSCOM publications is NATEC, Code 3.3.A. The screening point responsibilities are further broken down at NAVAIRWARCENACDIV, Lakehurst based on the type of report being submitted. These are outlined in the applicable report paragraphs, 11.11 through 11.14. Duties of the screening point for all type reports include the following:

a. The screening point shall forward an initial response, acknowledging receipt of the discrepancy report, to the originator within the time limits specified in paragraphs 11.11 through 11.14.

b. The screening point shall forward ALRE discrepancy reports to the appropriate action point within the time limits specified in paragraphs 11.11 through 11.14.

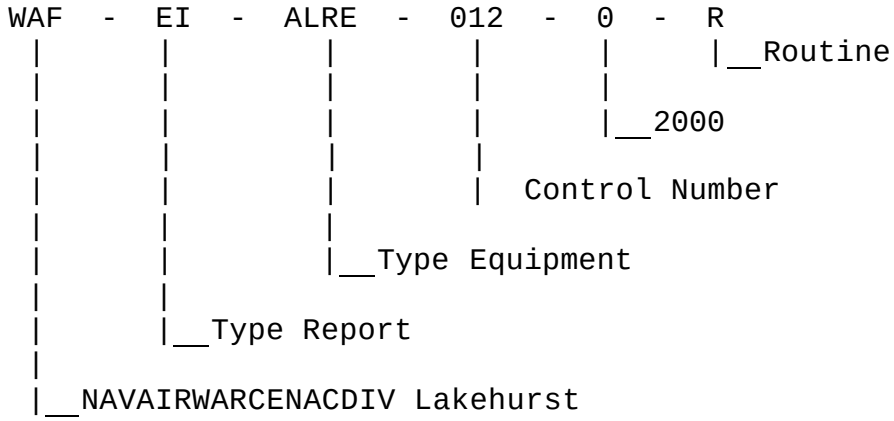
c. The screening points shall establish an audit trail for each ALRE Discrepancy Report forwarded to the action points for investigation. Additional guidance for screening points is provided in DLAR 4155.24/SECNAVINST 4855.5A.

d. Once the EI or HMR request or QDR report has been screened and accepted, the screening point shall assign an exhibit control number to the ALRE discrepancy report as follows:

(1) Request the deficient exhibit (if needed) from the originator (holding point) as soon as the need is determined, but not later than time prescribed for the particular report. The

support point may be authorized to request the exhibit directly from the holding point.

(2) Use the EI Request/QDR investigation control system for deriving control numbers shown in the following paragraphs:



(3) The first 3 elements are the ORG Code, as established in NAMSO 4790.A7065-01. The NAVAVNDEPOT identifier for NAVAIRWARCENACDIV Lakehurst is WAF. This element is followed by a dash (-).

(4) The next element are "EI", "QDR", or "HMR", followed by a dash (-).

(5) The next four characters are the system identifier (type equipment). ALRE will be used for launch and recovery systems equipment. This element is followed by a dash(-).

(6) The next three elements comprise the serial number. This number will be assigned sequentially throughout the calendar year (beginning with 001) without regard for the type of report. This element is followed by a dash (-).

(7) The next element is the calendar year identifier beginning with "0" for calendar year 2000, and continuing in arithmetic progression with changes in calendar year. This element is followed by a dash (-).

(8) The last element is a request urgency indicator, that is, "R" for Routine, "S" for Safety, and "M" for Mishap related. This indicator will be based on the nature of the request as specified in the ALRE discrepancy report.

11.10.7.3 The action point is a focal point identified within each activity, responsible for resolution of a reported product deficiency including necessary collaboration with support points.

For QDR reports, The action point should be determined using material cognizance (COG) codes, i.e., 1H, 5R, 7E, 9G, etc. For EI, HMR and all combination requests, the action point is the applicable equipment FST engineer at NAVAIRWARCENACDIV, Lakehurst, NJ. For ALRE discrepancy reports, the action point shall:

a. Investigate the reported deficiency.

b. Ensure action is taken to provide disposition instructions for the deficient product.

c. Carefully evaluate the need to request an exhibit. If the exhibit is essential in the investigation, request it from the report originator as soon as the need is known but no later than the time limits specified in paragraphs 11.11 through 11.14.

d. In the case of ALRE QDRs, determine if a contract warranty applies and initiate any additional special actions that are required.

e. Determine if the same deficiency is currently under investigation or has been resolved because of a previous report.

f. Forward an initial, interim or final response to the originator or screening point as applicable within the time limits specified in paragraphs 11.11 through 11.14.

g. Additional guidance for action points is provided in DLAR 4155.24/SECNAVINST 4855.5A (NOTAL).

11.10.7.4 The support point is an activity that assists the action point, when requested, by conducting and providing results of a special analysis or investigation pertinent to the correction and prevention of a reported deficiency. The support point, when requested, shall:

a. Conduct an investigation to determine the root cause(s) of the reported deficiency and the corrective actions necessary.

b. Evaluate the need to request an exhibit.

c. Provide an interim or final reply to the requesting action point within the time limits specified in paragraphs 11.11 through 11.11.

d. Additional guidance for support points is provided in DLAR 4155.24/SECNAVINST 4855.5A (NOTAL).

NOTE

Failure to meet the specified time limits does not relieve the requirement to process the ALRE Discrepancy Report. Activities will provide progress reports or request status reports as necessary to ensure timely completion of required action.

11.10.7.5 NAVAIRWARCENACDIV Lakehurst shall prepare a monthly summary/status report listing all new, open, and resolved (that month) ALRE discrepancy reports by type and category, and forward copies to COMNAVAIRSYSCOM, COMNAVAIRLANT, COMNAVAIRPAC, all CV/CVNs, NAVICP Philadelphia, NAVICP Mechanicsburg, NAVSAFECEN, and other concerned activities.

11.11 ALRE Hazardous Material Report (ALRE HMR)

11.11.1 This report provides a standard method for reporting material deficiencies which, if not corrected, could result in death or injury to personnel, or damage to or loss of aircraft, equipment, or facilities. Such incidents are reportable regardless of how or when the discrepant condition was detected.

NOTE
The ALRE HMR is not applicable for discrepancies related to new or newly reworked material. These discrepancies shall be reported using the ALRE QDR (CAT I or CAT II, as applicable.)

11.11.2 Reporting Criteria. Originating activities shall prepare and submit ALRE HMRs in accordance with this instruction.

11.11.2.1 Submit an ALRE HMR or HMR/EI by priority request on the NAVAIR EI website or a priority precedence (submission through the NAVAIR EI website is preferred and should be utilized when accessible) message within 24 hours of the discovery under one or more of the following conditions:

NOTE
In case of a naval aircraft mishap, the required reports will be submitted in accordance with OPNAVINST 3750.6Q (NOTAL). In addition, a Report of Deviation from Normal Catapult Launch and Arrested Landing will be filed, when applicable (refer to COMNAVAIRLANTINST 3750.30M (NOTAL) or COMNAVAIRPACINST 13800.6E (NOTAL)). However, submission of the preceding reports does not negate the requirement to submit ALRE discrepancy reports as described in this instruction.

a. Malfunction or failure of a component part which, if not corrected, could result in death or injury to personnel, or damage to or loss of aircraft, equipment, or facilities.

b. A configuration deficiency, which constitutes a safety hazard, is discovered in ALRE or associated equipment.

c. Urgent action or assistance is required and corrective action must be completed at an early date because of an operational requirement.

d. A condition is detected wherein the design of a part is such that incorrect installation can be easily accomplished and system malfunction or failure may occur.

11.11.3 Screening Point Responsibilities. The primary screening point for ALRE equipment is the ALRE FST, NAVAIRWARCENACDIV Lakehurst, NJ. The functions of the screening point are described in paragraph 11.15.7.2, and for HMR and/or EI requests the responsibilities are divided between the EI Clearinghouse representative and the ALRE FST technical representative. The responsibilities of the EI Clearinghouse and the FST technical representative are detailed below regarding HMR and/or EI requests. Differences between the handling of an EI as opposed to an HMR are minor and are delineated in paragraph 11.12.

11.11.3.1 EI Clearinghouse. The function of the Clearinghouse is to monitor the performance of the EI process, and assist Fleet activities resolve problems with specific engineering investigations. This will include determining the cognizant action point when requested by the originating activity or FST technical point of contact, providing deficiency report status and metrics for process improvements and providing screening capability for reports submitted via the Naval message system. Contact information for the EI Clearinghouse is available on the NAVAIR EI Website.

11.11.3.2 FST Technical Representative(s) Responsibilities. For HMR and/or EI reports the FST technical representative(s) acts as both screening point and action point. Response times are summarized in Figure 11-16. The responsibilities include:

a. Reviews the discrepancy report for proper FST technical representative routing and will readdress to the correct representative if required. Reviews for proper category classification, validity, correctness of entries, accuracy, and completion of information addresses. Conducts liaison with the request originator as required to obtain amplifying/clarifying information on the reported discrepancy/failure. “Accepts” receipt of the HMR and/or EI request via the NAVAIR EI website within 1 working day.

b. Study the history of failures and utilize the Fleet Support Team (FST) engineer (TOOL KIT) to determine the need for and value of an investigation on the equipment/material in question. The determination to proceed or not to proceed with the HMR and/or EI shall be completed and an initial response forwarded to the originator, in accordance with paragraphs c and d below, within 3 working days of the request.

c. When engineering analysis, technical dialog, or other factors indicate that an HMR and/or EI is not required, the FST engineer will inform the originator, as well as other required addressees through the NAVAIR EI website or by Naval Message. The FST engineer will summarize the factors that led to a decision to deny the HMR and/or EI request.

d. When it is determined an HMR and/or EI is required, the FST technical representative will provide an initial response to include an assigned investigation control number (assigned over the NAVAIR EI website in accordance with paragraph 11.10.7.2), and provide shipping instructions for the discrepant equipment / material or describe the arrangements for an on-site investigation. All HMR and/or EI exhibits will be shipped as directed in the shipping instructions received from the Fleet Support Team (FST).

e. The FST technical representative in cooperation with the applicable support points shall develop an EI exhibit examination plan and post it on the NAVAIR EI website. He/she will ensure the examination plan is provided to the support points and the investigating activity if exhibit is to be examined off-site. He/she will notify the local investigating activity-receiving personnel (Customer Service representative) of the request for the equipment/material exhibit, so the exhibit can be properly identified and routed when received.

f. Follow-up on exhibit non-receipt. Under normal circumstances, follow-up shall be made within 4 days for CONUS shipping or 8 days for non-CONUS shipping, after the initial response, but the period may be extended if it is known that shipment will take longer. Follow-up shall include a NAVAIR EI website report or message to the HMR and/or EI request originator, after first checking with the local supply activity and investigating activity-receiving area, as a minimum. All possible follow-up actions shall be taken, particularly on equipment/material related to HMRs.

g. Acknowledge receipt of HMR and/or EI exhibit via the NAVAIR EI website or naval message system within 1 working day of exhibit receipt.

h. The FST technical representative conducts the investigation in accordance with documented standard operating procedures. Immediate corrective action required to resolve life-threatening conditions shall be transmitted by telephone or message within 24 hours. An interim response for the HMR will be provided via the NAVAIR EI website or Naval message system within 10 working days of the initial response (if exhibit was not required) or material receipt (if exhibit was required). A final HMR response will be provided via the NAVAIR EI website or Naval message system within 30 working days of the initial response (if exhibit was not required) or material receipt (if exhibit was required). An interim response shall be provided every 30 working days until a final response is provided. Interim responses shall include status to date and a projected final response date. The final response shall include at a minimum, background, description of findings, conclusions, recommendations, related information, pending action and exhibit disposition information.

11.11.4 Action Point Responsibilities. As described above the action point for ALRE HMR and/or EI requests is the equipment technical representative at FST, NAVAIRWARCENACDIV Lakehurst and their responsibilities are listed above.

11.11.5 Support Point Responsibilities. The responsibilities of the support point are delineated in paragraph 11.10.7.4. Using information provided by the action point, the support point will complete the requested service or analysis specified in the examination plan in order to meet the action point’s reporting timeframes listed above.

11.12 ALRE Engineering Investigation (ALRE EI)

11.12.1 ALRE EIs are applicable to all ALRE systems, their subsystems, equipment, components, related SE, special tools, and fluids and materials used in the operation of the equipment. ALRE EIs:

a. Provide an investigation process to determine the cause and depth of fleet reported material failures.

b. Support the investigation of material associated with aircraft mishaps.

c. Support the Scheduled Removal Component (SRC) and Equipment History Record (EHR) programs by providing for the investigation of high-time and on-condition components and assemblies to confirm, revise, or initiate component or assembly operating times.

d. Provide for engineering assistance relating to any fleet ALRE material problem.

11.12.2 Types of ALRE EIs conducted are disassembly and inspection, material analysis, and engineering assistance.

11.12.3 Reporting Criteria. Originating activities shall prepare and submit ALRE EIs in accordance with this instruction.

11.12.3.1 Submit an ALRE EI request under one or more of the following conditions:

a. Safety is involved. This includes ALRE EI requests prepared in conjunction with aircraft mishaps and ALRE HMRs when it is evident that an unsafe condition exists.

b. Additional technical or engineering information is required to complete an aircraft mishap investigation.

c. Launch/recovery systems readiness is seriously impaired due to poor material reliability.

d. When environmental issues force material or process changes that conflict with existing publications or technical directives.

e. When directed by higher authority.

11.12.3.2 Originating activities shall prepare and submit ALRE EIs in accordance with this instruction. They shall:

a. Submit an ALRE EI request by routine request on the NAVAIR EI website or routine precedence message (submission through the NAVAIR EI website is preferred and should be used when accessible) within 3 calendar days after discovery of deficiency, unless combined with an ALRE HMR.

b. A combined ALRE HMR/EI shall be sent by priority request on the NAVAIR EI website or priority precedence message within 24 hours of discovery, see the submission guidance under Hazardous Material Report.

c. Hold defective or environmentally sensitive material in V-2 (ALRE) material control for a minimum of 60 days or until receipt of disposition instructions from the Lakehurst FST.

11.12.4 The screening point, action point and support point functions and responsibilities, the combined handling of the EI request by the EI Clearinghouse and FST Technical representative,

are nearly identical to those of the HMR. The only difference lies in the time of the interim response by the FST technical representative. An interim or final response for the EI will be provided via the NAVAIR EI website or Naval message system within 30 working days of the initial response (if exhibit was not required) or material receipt (if exhibit was required). It shall be the goal of the FST technical representative to complete the investigation within the specified 30 working days and provide the final report response. If circumstances will not allow the completion of the investigation within this timeframe, interim responses are required every 30 working days until a final response is provided.

11.13 ALRE Quality Deficiency Report (ALRE QDR)

11.13.1 An ALRE Quality Deficiency Report (QDR) provides maintenance activities with a method for reporting deficiencies in new or newly-reworked material which may be attributable to nonconformance with contractual or specification requirements or substandard workmanship. Failures must have occurred at zero operating time, during initial installation, operation, test, or check. Discrepancies discovered after the initial use do not qualify for ALRE QDR reporting, and shall be reported as ALRE HMRs and/or ALRE EIs, as appropriate. ALRE QDRs are targeted toward reporting possible deficiencies in QA during the manufacturing or rework process. The goal is to improve the quality of work done by naval aviation depots (NAVAVNDEPOTs), naval shipyards, contractors, and subcontractors returning reworked material to supply stock. The process flow for ALRE QDRs is depicted in figure 11-4. Processing for other ALRE discrepancy reports is similar.

11.13.2 Definition of Terms

11.13.2.1 New Material. Material procured under contract from commercial or government sources or manufactured by an in-house facility. Such material will be considered new until it has been proven in actual system operation.

11.13.2.2 Reworked Material. Material that has been overhauled, rebuilt, repaired, reworked, or modified by an outside military or commercial facility and unproven during actual system operation. Such material will be considered newly reworked until it has been proven during actual system operation.

11.13.3 Types of ALRE QDRs

11.13.3.1 CAT I. A quality deficiency in new or newly reworked material which may or will affect safety of personnel including causing injury or death; cause loss or major damage to a weapon

system; or impair the combat efficiency of an individual or organization, or jeopardize mission accomplishment.

11.13.3.2 CAT II. A report of a quality deficiency in new or newly-reworked material which does not meet the criteria set forth in Category I.

11.13.4 Reporting Criteria

11.13.4.1 Originating activities shall prepare and submit ALRE QDRs in accordance with this instruction.

11.13.4.1.1 CAT I ALRE QDR Submission. CAT I ALRE QDRs shall be submitted by a priority request on the NAVAIR EI website or a priority precedence message (the NAVAIR EI website is preferred and should be utilized when accessible) within 24 hours after discovery of the deficiency.

NOTE
Do not combine CAT I ALRE QDRs and ALRE EIs.

11.13.4.1.2 CAT II ALRE QDR Submission

a. CAT II ALRE QDRs shall be submitted by a routine request via the NAVAIR EI website or a routine precedence message to the fleet support team (FST), “INFO FOR” the originator's type commander. The FST for ALRE is NAVAIRWARCENACDIV Lakehurst.

b. Submit CAT II ALRE QDR routine precedence messages within 3 calendar days after discovery of the deficiency if, in the opinion of a QAI, a quality deficiency requires attention. Originating activities should evaluate the administrative costs involved to determine if such costs will exceed the benefits, giving less consideration to administrative costs when the deficiency is recurring or chronic in nature.

c. Units reporting CAT II ALRE QDR should follow submission instructions on the NAVAIR EI website when using the website or use the general format contained in paragraph 11.15.1.1 when using the naval message system.

d. CAT II ALRE QDRs must, as a minimum, include the FST as the action addressee and the originator’s type commander as an information addressee.

e. Send copies of all supporting documents, such as, DD 1348-1, DD 1155, photographs, test reports, and other pertinent

data to the FST in order to facilitate processing. Include the CAT II ALRE QDR report number on all documents.

f. CAT II ALRE QDRs on deficiencies in common or general type material, for example, tools, lubricants, corrosion preventative material, received bad from supply but not installed will be submitted to the Fleet Material Support Office (FLEMATSUPPO). NAVAIRWARCENACDIV Lakehurst remains the FST for ALRE special tools.

NOTE
Exhibits shall be held 60 days by the originating point or until disposition instructions are received from an appropriate screening or action point.

11.13.4.2 All originating activities shall turn in defective ALRE discrepancy report material exhibits to the ALRE material control work center to hold until receipt of exhibit disposition instructions from the FST or directing authority (see paragraph 11.10.6). When disposition instructions are received from the FST, the ALRE material control work center shall take the defective material to the supporting supply department for shipping.

NOTE
Any material directed by the FST to be released to an authorized contractor's representative or shipped directly to a contractor's plant shall be processed through the supporting supply department. Supply can issue the material on a custody basis, only after receiving authority from the FST.

11.13.5 Screening Point Responsibilities. The screening point for ALRE QDRs is FST, NAVAIRWARCENACDIV Lakehurst, NJ. The functions of the screening point are summarized in Figure 11-16 and described in paragraph 11.10.7.2. In addition to those responsibilities, the screening point shall:

a. Forward an initial response to the originator within 1 working day after receipt of a CAT I ALRE QDR, or within 3 working days after receipt of a CAT II ALRE QDR.

b. Forward the QDR to the appropriate action point within 1 working day after receipt of a CAT I ALRE QDR or within 10 working days after receipt of a CAT II ALRE QDR.

11.13.6 Action Point Responsibilities. For ALRE QDRs, the action point is often the particular exhibit’s applicable government procuring activity or the applicable contractor. Action point responsibilities are described in paragraph 11.10.7.3. In addition to those responsibilities, the action point shall:

a. Request the exhibit from the originator, if required, as soon as the need is known but no later than 5 working days after receipt of a CAT I ALRE QDR or within 10 working days after receipt of a CAT II ALRE QDR.

b. For CAT I QDRs, forward an interim or final reply to the screening point within 20 working days after CAT I QDR receipt (if exhibit was not required) or material receipt (if exhibit was required). If an interim or follow-up interim reply is sent, include status to date and a projected final reply date. Immediate corrective action required to resolve life-threatening conditions shall be transmitted by telephone or message within 24 hours.

c. For CAT II ALRE QDRs, forward an interim or final reply to the screening point within 30 working days after CAT II QDR receipt (if exhibit was not required) or material receipt (if exhibit was required). If an interim reply or follow-up interim reply is sent, include status to date and a projected final reply date.

11.13.7 Support Point Responsibilities. The support point responsibilities are described in paragraph 11.10.7.4. In addition to those responsibilities the support point will complete the requested service or analysis specified by the action point in order to meet the action point's reporting timeframes listed above.

11.14 ALRE Technical Publication Deficiency Report (ALRE TPDR)

11.14.1 This report provides a simplified procedure for reporting technical publication safety hazards and routine deficiencies.

11.14.1.1 A CAT I ALRE TPDR message is required when a technical publication deficiency is detected which, if not corrected, could result in death or injury to personnel or damage to or loss of aircraft, equipment, or facilities. These are to be reported using the priority precedence CAT I ALRE TPDR message format. The importance of submitting a message for the CAT I ALRE TPDR for safety related deficiencies is emphasized.

11.14.1.2 CAT II publication deficiencies are those that do not meet the criteria of a CAT I ALRE TPDR. They may include technical errors, wrong sequence of adjustments, part number errors or omissions, and microfilm deficiencies, such as poor aperture card film quality. These are to be reported using Technical Publication Deficiency Report, OPNAV 4790/66.

11.14.1.3 Technical publications include MRCs, maintenance and overhaul manuals, operation manuals, illustrated parts breakdowns, technical directives, service bulletins, and other technical manuals. The ALRE TPDR is not applicable when reporting deficiencies in instructions or notices.

11.14.1.4 For NAVSEASYSCOM publication deficiencies, refer to paragraph 11.16.4.

11.14.2 Reporting Criteria.

11.14.2.1 Originating activities shall prepare and submit ALRE TPDRs in accordance with this instruction.

11.14.2.2 CAT I ALRE TPDR

11.14.2.2.1 All activities shall prepare and submit a CAT I ALRE TPDR priority message within 24 hours of discovery of a deficiency in accordance with paragraph 11.15.2. The action addressee for the message report will be NAVAIRWARCENACDIV Lakehurst (Code 3.3.1) and NATEC (Code 3.3.A).

NOTE

For CAT I ALRE TPDRs involving ALRE QA and ALRE C cards, NATEC will not be a recipient of the report. The message report action addressee will be AIG ONE THREE EIGHT EIGHT FIVE. In the remarks section of the message state, "THIS MSG ACTION FOR NAVAIRWARCENACDIVLKE. INFO FOR ALL OTHERS." AIG ONE THREE EIGHT EIGHT FIVE shall not be used in the info addressee line of the message.

11.14.2.2.2 When urgency dictates, CAT I ALRE TPDRs may be reported by the most expeditious means available, for example, telephone, facsimile (FAX) or local visit. The NAVAIRWARCENACDIV Lakehurst FAX numbers are (732) 323-7232/7233.

NOTE

Oral or facsimile communication shall be promptly confirmed by message.

11.14.2.3 CAT II ALRE TPDR

11.14.2.3.1 All activities shall use the OPNAV 4790/66 (figures 11-12 and 11-13) within 10 working days for reporting routine technical publication deficiencies (CAT II). The original and one copy shall be sent to NATEC Code 3.3.A, one copy shall be sent to NAVAIRWARCENACDIV Lakehurst (Code 3.3.1), and one copy shall be sent to the originator's type commander (COMNAVAIRLANT or COMNAVAIRPAC).

NOTE
For CAT II ALRE TPDRs involving ALRE QA and ALRE C cards, NATEC will not be a recipient of the report. The report will be sent to NAVAIRWARCENACDIV Lakehurst (Code 3.3.1).

11.14.3 NATEC will serve as the central manager for all NAVAIRSYSCOM technical publications and shall:

a. Maintain a record of all technical manual deficiencies.

b. Acknowledge receipt of each ALRE TPDR to the originator and assign FST action for ALRE TPDRs as required. This will be accomplished within 1 working day after receipt of CAT I ALRE TPDRs, and within 10 working days after receipt of CAT II ALRE TPDRs.

c. Coordinate action with FST and contractor to ensure correction of technical publications.

d. Follow-up on each ALRE TPDR to ensure corrective action is accomplished.

e. Provide ALRE TPDR status as required to the applicable TYCOM.

11.14.3.1 FSTs will coordinate with the NATEC and take the appropriate action necessary to ensure the deficiency is resolved, for example, correctness of technical publication, appropriate printing assignment, or preparation and initiation of change for corrective action.

11.14.3.2 NATEC will report action taken on all ALRE TPDRs in a timely manner.

11.14.3.3 FSTs will notify NATEC and the ALRE TPDR originator of final disposition of each ALRE TPDR. FSTs shall also ensure that all addressees of the original report are included in all correspondence related to that report.

11.15 ALRE Discrepancy Report Preparation

11.15.1 ALRE HMR, ALRE EI and CAT I ALRE QDR Preparation.

11.15.1.1 Whenever possible, ALRE HMRs, ALRE EIs, ALRE QDRs and combined discrepancy reports should be reported through the NAVAIR EI website. Report submission instructions are posted on the website and are very similar to submission through the naval message system. When circumstances will not permit reporting through the website, the following format and content apply to ALRE HMR, ALRE EI, ALRE QDR, and combined ALRE discrepancy message reports. (Examples are provided in figures 11-5 through 11-10).

NOTE
Use of MINIMIZE CONSIDERED shall be in accordance with the NTP-3 (NOTAL).

Precedence: Priority/Routine (as applicable)
From: Message Originator
To: AIG ONE THREE EIGHT EIGHT FIVE

NOTE
AIG ONE THREE EIGHT EIGHT FIVE shall not be used in the info addressee line of the message.

Info: NAVICP Mechanicsburg PA//05632// (all 1H or 7E COG material)

NOTE
Security classifications are defined in the Department of the Navy Security Classification Guidance (OPNAVINST 5513.1E); however, every attempt should be made to employ UNCLAS to expedite routing.

Subj: List applicable subject or combination of subjects, for example ALRE HMR/CAT I QDR

Ref: A. OPNAVINST 4790.15D

NOTE
Reference other applicable instructions and any related mishap/investigation reports submitted in accordance with OPNAVINST 3750.6Q (NOTAL) and mishap classification and serial number. Include only instructions and references applicable to the occurrence. When a technical manual is referenced, include issue date and latest change date.

1. Reporting custodian and UIC. Example: USS SHIP (CV-00), 03300.

2. FST for failed item. Example: NAVAIRWARCENACDIV LAKEHURST, NJ.

3. Report Control Number (RCN): A number assigned by the originating activity in accordance with paragraph 11.15.5.3.

4. The four digit Julian date when deficiency was discovered.

5. National Stock Number (NSN) of discrepant item. Enter stock number of the unsatisfactory material, in the format xxxx-xx-xxx-xxxx, and the cognizance symbol, if known.

NOTE

Do not leave the NSN blank without ALRE maintenance officer's approval.

6. Discrepant Item Nomenclature. Annotate as officially described on drawings or in manuals.

7. For new material, indicate manufacturer's name and five digit CAGE code and the shipper's name. For reworked material, indicate the last rework activity, if known.

7A. FSCM: Enter Federal Supply Code for Manufacturers.

8. Part Number of Discrepant Item. Include NAVAIRWARCENACDIV Lakehurst and manufacturer's (if applicable) part numbers.

9. Serial, lot, or batch number (indicates number used). If unknown or not applicable, enter "UNK" or "N/A".

10. Contract Number or Purchase Order. Enter total contract number (13 to 17 characters), if available. For a 13-digit contract number, the first six characters identify buying activity (N68335 is NAVAIRWARCENACDIV Lakehurst, N00383 is NAVICP Philadelphia, N00140 is Naval Regional Contracting Center, etc). Next two digits identify year contract was awarded, next letter digit identifies contracting method, and last four digits identify the contract serial number. Contract numbers are especially important and must be entered when available.

a. Contract No: Enter the contract number, if applicable. Contract numbers are especially important and should be entered when available.

NOTE

The ALRE maintenance officer must approve an entry of "UNK" for the contract number.

b. Purchase Order No: Enter the purchase order number, if applicable.

c. Requisition No: Enter the original requisition number.

11. New or newly reworked, if known. Enter the word "NEW" for items received through the supply system (unless known to have been refurbished) or direct shipments from a manufacturer. Enter the word "REWORKED" for items received via the supply system that are known to have been refurbished or those items from an authorized rework activity (i.e., VRT/SIMA). If status is unknown, enter "UNK" (unknown). If not applicable (ALRE HMR/ALRE EI), enter "N/A".

12. Date manufactured, reworked, or overhauled, when available. If unknown, enter "UNK".

13. Operating time at failure/events. Indicate units (such as hours, hits or shots). If unknown, enter "UNK".

14. Government-furnished material (yes or no). Government-furnished material includes service change kits, interim spares, and initial outfitting items.

15. Quantity: Quantity shall be a count of each individual item, disregarding unit of issue. If problem does not relate to a quantity, enter "N/A".

a. Received: Enter the total number of items received in the lot or batch in which the unsatisfactory material condition was found, if known.

b. Inspected: Enter the number of items that were inspected for the deficiency.

c. Deficient: Enter the number of items that were determined to be deficient as a result of the inspection.

d. In Stock: Enter the number of items remaining in stock locally.

16. Deficient item works on or with: Indicate the name and part number of the equipment the problem is part of, adding MK and MOD where applicable.

a. End item (arresting gear engine, jet blast detector (JBD), etc.).

b. Next higher assembly (if applicable.)

17. Dollar value of deficient material (if known; otherwise enter "UNK") and man-hours to repair.

18. If hazardous material or procedure, include military specification (MILSPEC), type, class/grade, or NONE of no MILSPEC is available; if the report does not concern environmentally sensitive material or procedures, enter "N/A".

19. UNK.

20. Equipment Identification Code (EIC): Enter the most specific code available.

21. Exhibit Disposition. Exhibits are important to determine the root cause of a problem, to return to a contractor for corrective-action purposes, or to precipitate a stock system purge action. Material shall be handled as per paragraph 11.10.6. Enter "EXHIBIT HELD" to indicate that problem item is available for examination. If an exhibit is being held, indicate the number of days (minimum of 60 calendar days) the exhibit will be held.

NOTE

Material shall be shipped within 3 days of receipt of disposition instructions from the FST.

22. Details

a. Narrative description. As precisely as possible, describe the type, scope and extent of the problem, known or probable causes, pertinent service changes incorporated, environmental issue listing references and regulatory agency, comments/recommendations to reduce or eliminate the source of the problem (if any). Indicate urgency, assistance needed, etc.

b. How safety of personnel or activity mission is affected.

c. Number of similar deficiencies in like items reported by the originating activity, for example, five in the past 4 months.

d. How deficiency was detected or confirmed, such as, visually or functional operation. Where deficiency was discovered, for example, maintenance/operational test.

e. Storage/handling information, if applicable. (If it appears these factors have contributed to the deficient material condition).

f. Indicate if supporting documents will be supplied. Photographs to follow, are available upon request, are not available (as applicable). When photographs are taken, place a

ruler alongside the object so as to appear in each photograph. Measurements should also appear on sketches. Write the report control number from block 3 on the back of photographs.

g. Description of incorrectly identified new material, if applicable.

h. In order to receive credit for defective 9 COG and SPCC COG (1H,7E,7G,7H) material:

(1) List the original MILSTRIP requisition document number, "BILL TO" DOD Activity Address Code (DODAAC) (if different from requisitioned DODAAC), and the applicable Fund and Signal codes. When the original document number cannot be determined, a MILSTRIP document number must be assigned as follows:

NOTE

Following closing action on discrepant NAVICP managed material (any remaining 1H, 3H, 4R, 5R, 7E, 7G, 7H, 7R and OM COG), NAVAIRWARCENACDIV Lakehurst will request credit to the end user by submitting a letter to NAVICP Philadelphia & Mechanicsburg (Material Returns Program Code 015), as appropriate. The letter must contain the complete document number under which the discrepant item was issued, and must be accompanied by a copy of the original CAT I/II QDR message with closing action. This procedure requires that the originating activity provide the original MILSTRIP requisition document number as detailed above.

(a) The originating point DODAAC will comprise the first six characters (the DODAAC will receive credit unless otherwise specified).

(b) The current Julian calendar date for the next four characters - the ending four-digit serial number beginning with "U" will complete the constructed document number.

(c) Example: N63124-4286-U001

i. Name, rank, and DSN number of ALRE maintenance officer. (If deployed, delete phone number and insert the word DEPLOYED).

j. Work center code (example: VB01 for Catapult No. 1.)

k. N/A.

l. N/A.

23. Location of Deficient Material: (Use this block only if the ALRE exhibit is at a location other than the originating point).

11.15.2 CAT I ALRE TPDR Preparation.

11.15.2.1 The following format and content apply to CAT I ALRE TPDR message reports. (An example is provided in figure 11-11).

NOTE
Use of MINIMIZE CONSIDERED shall be in accordance with the NTP-3 (NOTAL).

Precedence: Priority
From: Message Originator
To: AIG ONE THREE EIGHT EIGHT FIVE
NATEC SAN DIEGO CA//3.3.A//

NOTE
AIG ONE THREE EIGHT EIGHT FIVE shall not be used in the info address line of the message.

NOTE
Security classifications are defined in the Department of the Navy Security Classification Guidance (OPNAVINST 5513.1E); however, every attempt should be made to employ UNCLAS to expedite routing.

UNCLASS//13800//
MSGID/GENADMIN/V-2//
SUBJ/CAT I ALRE TECHNICAL PUBLICATION DEFICIENCY REPORT
REF/A/DOC/OPNAV/01FEB97//
AMPN/OPNAVINST 4790.15D
RMKS/THIS MSG DUAL ACTION FOR NATEC SAN DIEGO AND NAVAIRWARCENACDIV LKE. INFO FOR ALL OTHERS.
1. Reporting custodian/UIC.

2. Equipment FST.

3. Report Control Number.

4. Julian date deficiency discovered.

5. NSN of publication. **

6. through 21: N/A.

22. Details.

a. Technical manual number.

b. Equipment model number. **

c. Basic date of technical manual

d. Change date/change number.

e. Work Package Number **

f. Page number.

g. Paragraph number.

h. Figure number/table number.

i. Aperture card number. **

j. Aperture card date. **

k. Aperture card revision number and date. **

l. Deficiency (be specific).

m. Recommendations (be specific).

n. Name, rank, and DSN number of ALRE maintenance officer. (If deployed, delete phone number and insert the word DEPLOYED).

NOTE
**** indicates these information blocks are not applicable for CAT I ALRE TPDRs concerning ALRE QA cards.**

11.15.3 CAT II ALRE TPDR Preparation.

11.15.3.1 The format and content for submission of CAT II ALRE TPDR reports are contained on the reverse of the Technical Publications Deficiency Report (TPDR) (OPNAV 4790/66). (Refer to figures 11-12 and 11-13).

NOTE
For CAT II ALRE TPDRs involving ALRE QA cards, refer to paragraph 11.19.2.3.1.

11.16 Other Required Reports

11.16.1 Familiarity with reports and compliance with reporting procedures such as Departures from Specifications, PMS Feedback Reports, and Technical Manual Deficiency/Evaluation Reports (TMDERs) are necessary to an effective QA program.

11.16.2 A Departure from Specifications is a lack of compliance with any authoritative document, plans, procedure, instruction or notice. Specifications include:

a. ALRE numerical drawing list, detail specifications.

b. MIL Standard and MIL Spec series.

c. NAVAIRSYSCOM technical manuals, instructions, bulletins, letters, notices, repair procedures, etc.

d. COMNAVAIRLANT/COMNAVAIRPAC instructions/notices.

e. OPNAV instructions/notices.

11.16.2.1 Whenever a departure from ALRE specifications (material and/or installation) is necessary, a message request for Departure from Specifications will be submitted to the TYCOM (info COMNAVAIRSYSCOM and NAVAIRWARCENACDIV Lakehurst). CINCLANTFLT / CINCPACFLTINST 4790.3 (NOTAL) gives a complete description of this procedure. Departures from Specification will be categorized as follows:

a. Minor departure - A departure from ALRE specification in a system/subsystem that poses no threat to safety of flight, injury to personnel or damage to equipment. Commanding officers have authority to approve such departure to place equipment in operational status but must follow up with a message to the TYCOM.

b. Major departure - A departure from ALRE specification in a system/subsystem that could jeopardize safety of flight, cause injury to personnel or damage to equipment. Such a departure must be granted by the TYCOM before normal operations resume. NAVAIRWARCENACDIV Lakehurst, as the FST, will make an engineering appraisal of the departure when requested by the TYCOM.

11.16.3 PMS Feedback Report. The PMS Feedback Report (OPNAV 4790/7B) is used to report discrepancies related to the Planned Maintenance System (PMS). The report notifies FTSCLANT/PAC, and the TYCOM on PMS issues, procedural problems, or deficiencies in documentation requirements. Instructions on its use are found in OPNAVINST 4790.4C (NOTAL) and NAVSEAINST 4790.3B (NOTAL).

11.16.4 Technical Manual Deficiency/Evaluation Report. Discrepancies in NAVSEASYSCOM technical manuals will be reported via the Technical Manual Deficiency/Evaluation Report (TMDER) (NAVSEA 4160/1) (Rev 10-89). (Refer to figure 11-14.)

11.17 Address Indicator Group ONE THREE EIGHT EIGHT FIVE

11.17.1 AIG ONE THREE EIGHT EIGHT FIVE contains approximately 30 addressees (the number can vary from year to year) including each carrier, all ALRE shore activities, all CAFSU field offices, SIMAs, and some training commands. The exact list of AIG addresses is not listed due to the occasional changes in the AIG's composition. To obtain a current list, contact the command communications center AIG clerk. NAVAIRSYSCOM PMA 251F, as the cognizant authority of AIG ONE THREE EIGHT EIGHT FIVE, will update the AIG annually (June) via recapitulation message.

11.17.2 Care shall be taken in preparing naval messages to ensure that the AIG is NOT included in the "INFO" line of the message text. Further, commands shall NOT duplicate addresses, by ensuring that a command listed in the AIG is not also listed in the "TO" or "INFO" text of the message.

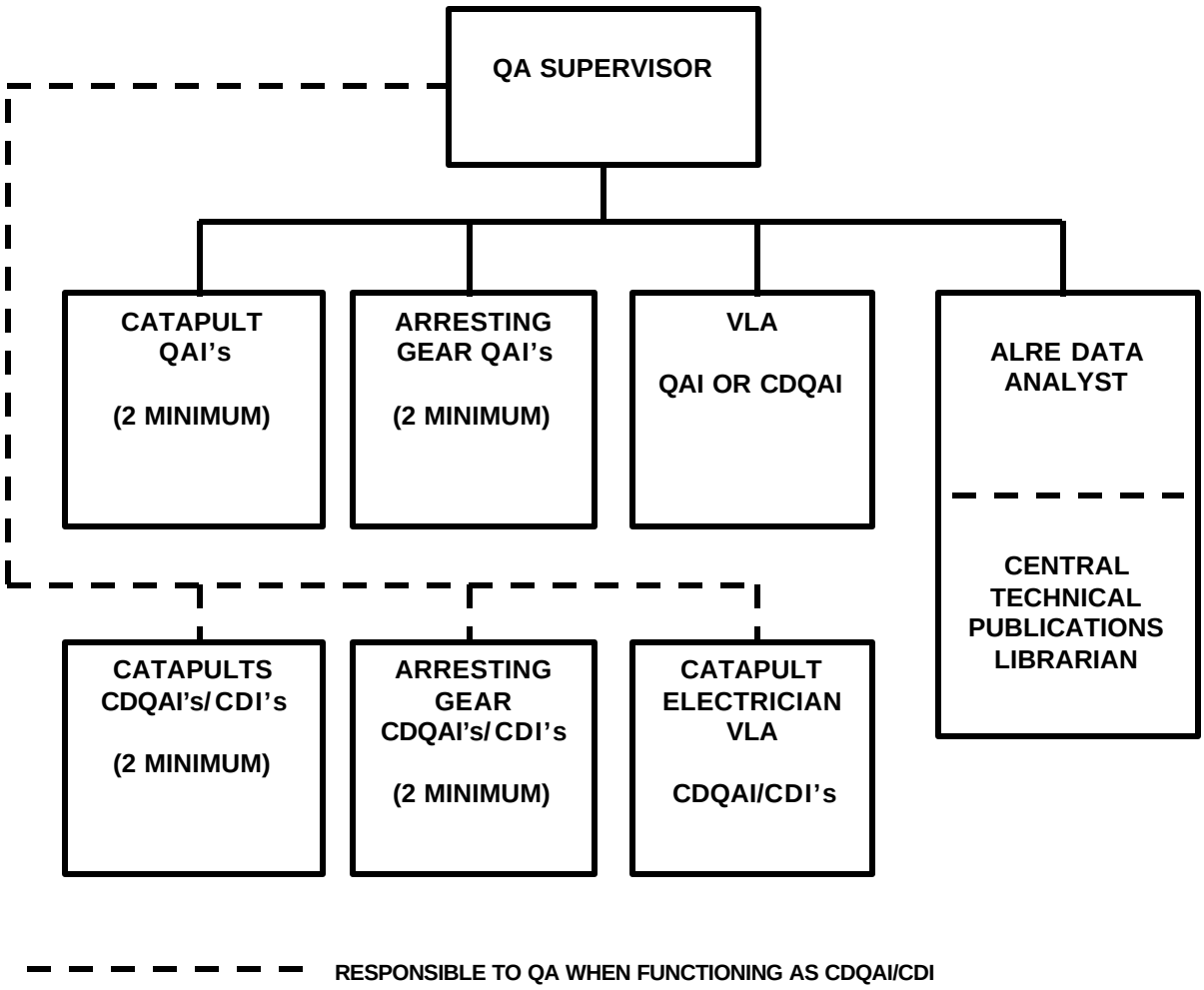


Figure 11-1. ALRE Quality Assurance Organization

ALRE QUALITY ASSURANCE INSPECTOR RECOMMENDATION/DESIGNATION		
CANDIDATE NAME RATE		
I. WORK CENTER SUPERVISOR RECOMMENDATION In accordance with OPNAVINST 4790.15 the above named person is recommended for: QAI CDQAI CDI		
FOR: (SYSTEM/SUBSYSTEM, ETC.)		
W/C SUPERVISOR	SIGNATURE	DATE
II. QUALITY ASSURANCE ENDORSEMENT The candidate has been examined in accordance with OPNAVINST 4790.15 and has passed all requirements satisfactorily. Recommended approval.		
QA SUPERVISOR TYPED NAME AND RANK	SIGNATURE	DATE
III. ALRE MAINTENANCE OFFICER ENDORSEMENT RECOMMENDED APPROVAL DISAPPROVAL		
MAINTENANCE OFFICER TYPED NAME AND RANK	SIGNATURE	DATE
IV. V-2 DIVISION OFFICER ENDORSEMENT RECOMMENDED APPROVAL DISAPPROVAL		
V-2 OFFICER TYPED NAME AND RANK	SIGNATURE	DATE
V. AIR OFFICER ENDORSEMENT/ACTION APPROVAL DISAPPROVAL DESIGNATED NOT DESIGNATED		
AIR OFFICER TYPED NAME AND RANK	SIGNATURE	DATE
VI. COMMANDING OFFICER ACTION DESIGNATED NOT DESIGNATED		
COMMANDING OFFICER TYPED NAME AND RANK	SIGNATURE	DATE
VII. DESIGNEE RESPONSIBILITY I understand my responsibility as set forth herein: "When performing Inspections, I am considered to be the direct representative of the Commanding Officer for ensuring operational safety of the Item concerned. I will not permit factors, such as operational desires, maintenance consideration, personal relations or the approach of liberty to modify my judgement. By signing an inspection report, I am certifying upon my own individual responsibility that the work involved has been personally inspected by me; that It has been properly completed and is in accordance with current instructions and directives; that it is satisfactory; that any related parts or components which may have been removed by the work are properly replaced and all parts are secure; and that the work has been performed in such a manner that the item is completely safe for use."		
CANDIDATE TYPED NAME	SIGNATURE	DATE

Original to: Quality Assurance
Copy to: Branch Officer

Figure 11-2. Quality Assurance Inspector Recommendation/ Designation

CVN-76 MI 1-00
28 February 2000

CVN-76 Maintenance Instruction 1-00

From: ALRE Maintenance Officer

Subj: ALRE Quality Assurance Audit Program

Ref: (a) (Include references as applicable)

Encl: (1) (Include enclosures as applicable)

1. Purpose. (The first paragraph of the maintenance instruction shall state the purpose of the directive.)

2. Cancellation. (The second paragraph should contain a cancellation statement if applicable.)

3. (Third and subsequent paragraphs contain the text of the maintenance instruction, such as background information, responsibilities, or action requirements.)

SAMPLE

S.V.L. Coupling
(Signature and typed name
of the ALRE maintenance officer)

Distribution:
(Include a listing of
applicable work centers)

Figure 11-3. Sample Maintenance Instruction

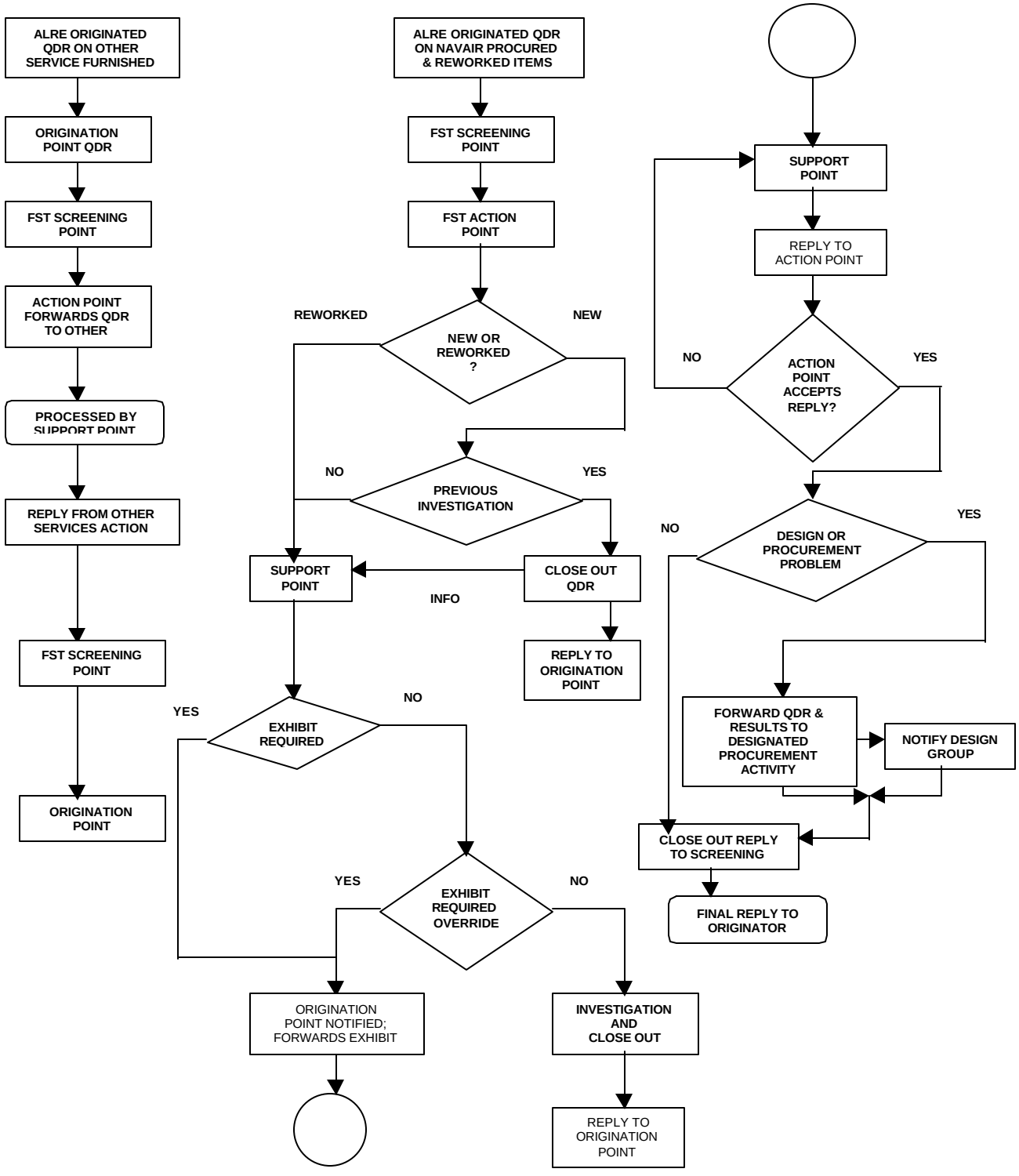


Figure 11-4. ALRE QDR Process Flow

FROM:USS SHIP//
TO: AIG ONE THREE EIGHT EIGHT FIVE//
UNCLAS //13800//
MSGID/GENADMIN/V-2//
SUBJ/ALRE HAZARDOUS MATERIAL REPORT//
REF/A/DOC/OPNAV/28FEB97//
AMPN/OPNAVINST 4790.15D//
RMKS/THIS MSG ACTION FOR NAVAIRWARCENACDIV LKE. INFO ALL OTHERS.//
1. ORIG: USS SHIP (CVN 00) 03300
2. FST: NAVAIRWARCENACDIV LAKEHURST NJ
3. RCN: R03300958032
4. DATE DISC: 2300
5. NSN: 5R-1710-00-102-7796
6. NOMEN: PURCHASE CABLE ASSEMBLY
7. MFR: RIDON AMERICAN CORP. 91796
7A. FSCM:
8. P/N: 515659-2
9. S/N: UNK
10A. CONT NO: N00383-91-C-5158
10B. PURCHASE ORDER NO:
10C. REQUISITION NO:
11. NEW/RWK: N/A
12. DATE MFD/REWKD/OH: UNK
13. OP TIME: 50 HITS
14. GFE: N/A
15. QTY.:
    A. RCVD: N/A
    B. INSP: ONE
    C. DEF: ONE
    D. IN STOCK: N/A
16. A. END ITEM: MK7 MOD3 ARRESTING GEAR P/N 624216-15
    B. NXT HGHR ASSY: PENDANT ENGINE
17. COST: $10,777
18. N/A
19. UNK
20. EIC: 7C1A140 PENDANT AND ANCHOR INSTALLATION
21. DISP: EXHIBIT HELD BY CV-00 V-2 (ALRE) MATERIAL CONTROL FOR 60 DAYS PENDING DISPOSITION INSTRUCTIONS.
22. DETAILS:
    A. DURING FIRST 50 HIT PMS, INSPECTED CONTRACTOR POURED TERMINAL. FOUND SIX CAVITIES ON FACE OF TERMINAL. FIVE OF THESE HOLES WERE GREATER THAN ACCEPTABLE CRITERIA IAW NAVAIR 51-5BCA1.1 CHAPTER 17.
    B. COULD CAUSE WIRE TO FAIL AT TERMINAL RESULTING IN REDUCED OPERATIONAL CAPABILITY, LOSS OF AIRCRAFT OR LIFE.
    C. NONE
    D. VISUAL INSPECTION
    E. THROUGH H. N/A
    I. L.H. CROSSHEAD, CWO4, ALRE MAINTENANCE OFFICER, DEPLOYED
    J. VB07
    K. AND L. N/A
23. LOC: N/A

Figure 11-5. Sample ALRE Hazardous Material Report Message

FROM: USS SHIP//
TO: AIG ONE THREE EIGHT EIGHT FIVE//
UNCLAS //13820//
MSGID/GENADMIN/V-2//
SUBJ/ALRE ENGINEERING INVESTIGATION REQUEST//
REF/A/DOC/OPNAV/28FEB97//
AMPN/OPNAVINST 4790.15D//
RMKS/THIS MSG ACTION FOR NAVAIRWARCENACDIV LKE. INFO ALL OTHERS.//
1. ORIG: USS SHIP (CVN-00) 03300
2. FST: NAVAIRWARCENACDIV LAKEHURST NJ
3. RCN: R03300958032
4. DATE DISC: 2355
5. NSN: 5R-1720-00-476-0009
6. NOMEN: CHOKE RING
7. MFR: TEXAS ELECTRONICS INC. 80020
7A. FSCM:
8. P/N: 14-50684-3
9. S/N: UNK
10A. CONT NO.: V00383-87-C-9621
10B. PURCHASE ORDER NO:
10C. REQUISITION NO:
11. NEW/REWKD: NEW
12. DATE MFD/REWRKD/OH: UNK
13. OP TIME: UNK
14. GFE: N/A
15. QTY:
    A. RCVD: N/A
    B. INSP: ONE
    C. DEF: ONE
    D. IN STOCK: N/A
16. A. END ITEM: C13 MOD2 CATAPULT P/N 622295-1
    B. NXT HGHR ASSY: WATER BRAKE INSTALLATION
17. COST: $482
18. N/A
19. UNK
20. EIC: 7A1AK00 WATER BRAKE INSTALLATION
21. DISP: EXHIBIT HELD FOR 60 DAYS CVN-00 V-2 (ALRE) MATERIAL CONTROL AWAITING DISPOSITION INSTRUCTIONS.
22. DETAILS:
    A. LEFT HAND CHOKE RING FROM CATAPULT 3 HAS A CRACK IN SIX O'CLOCK POSITION. CRACK IS 1/32 IN. WIDE ON SURFACE AND 2 IN LONG.
    B. CAN CAUSE DEGRADED WATERBRAKE PERFORMANCE.
    C. NONE
    D. VISUAL INSPECTION
    E. N/A
    F. PHOTOS AVAILABLE UPON REQUEST.
    G. AND H. N/A
    I. J.W. BOWCAT, LT, ALRE MAINTENANCE OFFICER, DEPLOYED
    J. VB03
    K. AND L. N/A
23. LOC: N/A

Figure 11-6. Sample ALRE Engineering Investigation Request Message

FROM: USS SHIP//
TO: AIG ONE THREE EIGHT EIGHT FIVE//
UNCLAS //13800//
MSGID/GENADMIN/V-2//
SUBJ/ALRE ENGINEERING INVESTIGATION REQUEST//
REF/A/DOC/OPNAV/28FEB97//
AMPN/OPNAVINST 4790.15D//
RMKS/THIS MSG ACTION FOR NAVAIRWARCENACDIV LKE. INFO ALL OTHERS.//
1. ORIG: USS SHIP (CVN-00) 03300
2. FST: NAVAIRWARCENACDIV LAKEHURST NJ
3. RCN: R03300958032
4. DATE DISC: 3114
5. NSN: 9150-00-272-7652
6. NOMEN: GREASE, GRAPHITE
7. MFR: NONFLUID OIL CORP
7A. FSCM:
8. P/N: N/A
9. S/N: N/A
10A. CONT NO.: DLA 40089 MA028
10B. PURCHASE ORDER NO:
10C. REQUISITION NO:
11. NEW/REWKD: N/A
12. DATE MFD/REWRKD/OH: N/A
13. OP TIME: NONE
14. GFE: NO
15. QTY: 70 LBS
    A. RCVD: 0
    B. INSP: N/A
    C. DEF: N/A
    D. IN STOCK: NONE
16. A. END ITEM: ENGINE ASSY
    B. NXT HGHR ASSY: A/G ENGINE
17. COST: $54.00
18. MILSPEC: VV-G-671
19. UNK
20. EIC: (SPMIG # 568)
21. DISP: EXHIBIT HELD FOR 60 DAYS CVN-00 V-2 (ALRE) MATERIAL CONTROL AWAITING DISPOSITION INSTRUCTIONS.
22. DETAILS:
    A. VV-G-671 IS USED THROUGHOUT THE A/G SYSTEM. VV-G-671 IS NOT ABLE TO BE ACQUIRED THROUGH THE LOCAL SUPPLY SYSTEM. SUPPLY IS UNABLE TO BRING THIS ITEM ABOARD SHIP DUE TO LOCAL AND STATE EPA REGULATIONS. DISPOSITION HAS BEEN DIFFICULT DUE TO HIGH COSTS.
    B. UNK
    C. ORIGINAL
    D. SUPPLY ORDER REJECTED
    E. THROUGH H. N/A
    I. ABEC L. RUNOUT, QA, LCPO
    J. VB20
    K. AND L. N/A
23. LOC: N/A

Figure 11-7. Sample ALRE Engineering Investigation Request Message (Environmental Impact)

FROM: USS SHIP//
TO: AIG ONE THREE EIGHT EIGHT FIVE//
UNCLAS //13820//
MSGID/GENADMIN/V-2//
SUBJ/ALRE HAZARDOUS MATERIAL REPORT/ENGINEERING INVESTIGATION REQUEST//
REF/A/DOC/OPNAV/28FEB97//
AMPN/OPNAVINST 4790.15D//
RMKS/THIS MSG ACTION FOR NAVAIRWARCENACDIV LKE. INFO ALL OTHERS.//
1. ORIG: USS SHIP (CVN-00) 03300
2. FST: NAVAIRWARCENACDIV LAKEHURST NJ
3. RCN: R03300958032
4. DATE DISC: 2351
5. NSN: 5R-1720-00-716-1269
6. NOMEN: EMERGENCY CUTOUT VALVE
7. MFR: TELEDYNE REPUBLIC MFG. 80080
7A. FSCM:
8. P/N: 407530-2
9. S/N: UNK
10A. CONT NO: N68335-86-C-1221
10B. PURCHASE ORDER NO:
10C. REQUISITION NO:
11. NEW/RWKD: N/A
12. DATE MFR/RWKD/OH: UNK
13. OP TIME: VALVE INSTALLED FOR 12 MONTHS
14. GFE: N/A
15. A. QTY RCVD: N/A
B. INSP: ONE
C. DEF: ONE
D. IN STOCK: EIGHT
16. A. END ITEM: C13 MOD1 CATAPULT P/N 622295-1
B. NXT HGHR ASSY: CENTRAL CHARGING PANEL
17. COST: $400
18. N/A
19. UNK
20. EIC: 7A6A100 CENTRAL CHARGING PANEL
21. DISP: EXHIBIT HELD CVN-00 V-2 (ALRE) MATERIAL CONTROL FOR SIXTY DAYS AWAITING DISPOSITION INSTRUCTIONS.
22. DETAILS: A. VALVE STEM SNAPPED AT HANDLE DURING MONTHLY PMS FUNCTIONAL TEST. HANDLE CANNOT BE REMOUNTED ON VALVE STEM. VALVE STEM APPEARS TO BE INADEQUATELY DESIGNED AT THREADED HOLE FOR THE HANDLE FASTENING SCREW. STEM SNAPPED AFTER LIGHT IMPACT OF HANDLE AGAINST VALVE STOP.
B. POSSIBLE CATASTROPHIC POTENTIAL IF THIS OCCURRED DURING AN AIRCRAFT HANGFIRE; LOSS OF AIRCRAFT OR LIFE. NO EMERGENCY PROCEDURES EXIST IF CUTOUT VALVE STEM FAILS IN MID STROKE.
C. NONE
D. FUNCTIONAL TEST
E. THROUGH H. N/A
I. R.T. LAUNCHVALVE, LT, ALRE MAINTENANCE OFFICER, DEPLOYED
J. VB03
K. AND L. N/A
23. LOC: N/A

Figure 11-8. Sample ALRE Hazardous Material Report/Engineering Investigation Request Message

FROM: USS SHIP//
TO: AIG ONE THREE EIGHT EIGHT FIVE//
UNCLAS //13810//
MSGID/GENADMIN/V-2//
SUBJ/CAT I ALRE QUALITY DEFICIENCY REPORT//
REF/A/DOC/OPNAV/28FEB97//
AMPN/OPNAVINST 4790.15D//
RMKS/THIS MSG ACTION FOR NAVAIRWARCENACDIV LKE. INFO ALL OTHERS.//
1. ORIG: USS SHIP (CV-00) 03300
2. FST: NAVAIRWARCENACDIV LAKEHURST NJ
3. RCN: V03300958032
4. DATE DISC: 2330
5. NSN: 5R-1710-00-102-7796
6. NOMEN: CABLE AND REEL ASSEMBLY
7. MFR: CANADIAN COMMERCIAL CORP. 98247
7A. FSCM:
8. P/N: 515659-2
9. S/N: UNK
10A. CONT NO: N00383-85-C-3512
10B. PURCHASE ORDER NO:
10C. REQUISITION NO:
11. NEW/RWKD: NEW
12. DATE MFR/RWKD/OH: UNK
13. OP TIME: ZERO HITS
14. GFE: NO
15. A. QTY RCVD: THREE
B. INSP: ONE
C. DEF: ONE
D. IN STOCK: TWO
16. A. END ITEM: MK7 MOD2 ARRESTING GEAR ENGINE P/N 624216-15
B. NXT HGHR ASSY: PENDANT ENGINE
17. COST: $10,820; APPROX 40 MANHOURS TO REPAIR
18. N/A
19. UNK
20. EIC: 7C1A140 PENDANT AND ANCHOR INSTALLATION
21. DISP: EXHIBIT HELD BY CV-00 V-2 (ALRE) MATERIAL CONTROL FOR 60 DAYS AWAITING DISPOSITION INSTRUCTIONS.
22. DETAILS:
A. DURING INSTALLATION OF NEW PURCHASE CABLE DISCOVERED BOTH MANUFACTURER POURED TERMINALS DID NOT MEET REQUIRED SPEC'S IAW NA 51-5BBA-1.1. BOTH TERMINALS HAD EXCESSIVE NUMBER OF PULLED WIRES AND CAVITIES. ZINC RECESSION ON THE STARBOARD SIDE WAS 0.098 IN. INSTEAD OF MAXIMUM 0.060 IN. DISCREPANT TERMINALS WHERE CUT AND REPOURED ONBOARD.
B. POSSIBLE WIRE FAILURE AT TERMINAL RESULTING IN REDUCED OPERATIONAL CAPABILITY; POSSIBLE LOSS OF AIRCRAFT OR LIFE.
C. NONE
D. DETECTED DURING VISUAL INSPECTION PRIOR TO INSTALLATION.
E. N/A
F. PHOTOS ARE AVAILABLE UPON REQUEST.
G. AND H. N/A
H. N0330050329003
I. L.H. CROSSHEAD, LT, ALRE MAINTENANCE OFFICER, DEPLOYED.
J. VB08
K. and L. N/A//
23. LOC: N/A

Figure 11-9. Sample CAT I ALRE Quality Deficiency Report Message

FROM USS SHIP
TO AIG ONE THREE EIGHT EIGHT FIVE
UNCLAS//13800//
MSGID/GENADMIN/V-2//
SUBJ/CAT II ALRE QUALITY DEFICIENCY REPORT//
REF/A/DOC/OPNAV/28FEB97//
AMPN/OPNAVINST 4790.15D//
RMKS/THIS MSG ACTION FOR NAVAIRWARCENACDIV LKE. INFO ALL OTHERS.//
1. ORIG. USS SHIP (CV00) 03300
2. FST: NAVAIRWARCENACDIV LAKEHURST NJ
3. RCN: R03300968001
4. DATE DISC: 7034
5. NSN: S9C-1720-00-476-0009
6. NOMEN: CHOKE RING
7. MFR: PIONEER SALES COMPANY
7A. FSCM: 62577
8. P/N 14-50684-3
9. S/N UNK
10A. CONTRACT NR. N00383-87-C-9621
10B. PURCHASE ORDER NR. N/A
10C. REQUISITION NO:
11. ITEM: NEW
12. DATE: UNK
13. OP TIME: ZERO
14. GFE: NO
15A. QTY RCVD: 10
15B. INSPECTED: 10
15C. DEFICIENT: 10
15D. IN STOCK: 0
16A. END ITEM: C13 CATAPULT 10-61316-1
16B. NXT HGHER ASSY: WATER BRAKE ASSY 610614-1
17. COST: $829.20 EA
18. EST. REPAIR COST: UNK
19. WARRANTY: UNK
20. EIC: 7A1AK34 CYLINDER, WATER BRAKE
21. ACTION: EXHIBIT HELD ONBD FOR 60 DAYS AWAITING DISPOSITION INSTRUCTIONS.
22A. DETAILS: LOW URGENCY. ADEQUATE SPARES FROM ANOTHER CONTRACT ONBOARD.
22B. SAFETY/OPERATION: SAFETY NOT A FACTOR/MISSION NOT AFFECTED.
22C. NUMBER: NONE
22D. DURING PMS DISCOVERED LEFT CHOKE RING, CATAPULT THREE OUT OF TOLERANCE.
ATTEMPTED TO INSTALL NEW CHOKE RING. RING WOULD NOT THREAD INTO WTR BK CYL.
USING BOTH OLD RING FOR COMPARISON AND APERTURE CARD, QA DISCOVERED THREAD
PITCH OF NEW CHOKE RING INCORRECTLY MANUFACTURED.
22E. PACKING FAILURE: PACKING SEEMS SUFFICIENT
22F. PHOTOS: PHOTOS TAKEN AND AVAILABLE ON REQUEST.
22G. DESCRIPTION: N/A
22H. N/A
22I. POC: A.B. CRUISER, CWO4, ALRE MAINTENANCE OFFICER, DEPLOYED.
22J. VB03
BT

FIGURE 11-10. Sample CAT II ALRE Quality Deficiency Report Message

FROM USS SHIP
TO AIG ONE THREE EIGHT EIGHT FIVE//
NATEC SAN DIEGO CA//3.3.A//
UNCLAS //13820//
MSGID/GENADMIN/V-2//
SUBJ/CAT I ALRE TECHNICAL PUBLICATION DEFICIENCY REPORT//
REF/A/DOC/OPNAV/01OCT00//
AMPN/OPNAVINST 4790.15D//
RMKS/THIS MSG DUAL ACTION FOR NATEC AND NAVAIRWARCENACDIV LKE.
INFO FOR ALL OTHERS.
1. ORIG: USS SHIP (CVN-00) 03300
2. CFA: NAVAIRWARCENACDIV LAKEHURST NJ
3. RCN: N03300008032
4. DATE DISC: 0249
5. NSN: 0851-LP-005-7041
6. THROUGH 21. N/A
22. A. TECH MAN: NA 51-15ABD-2
B. EQUIP MODEL: N/A
C. BASIC PUB DATE: 1 AUGUST 1990
D. CHG DATE/NO: N/A
E. WK PACK NO: N/A
F. PG NO: 3-23
G. PARA NO: 3-39.8
H. FIG NO: N/A
I. APTR CARD NO: N/A
J. APTR CARD DATE: N/A
K. APTR CARD REV: N/A
L. DEF: PARAGRAPH 3-39.8 STATES LAUNCH VALVE STROKE TIMER TIMES WILL BE DETERMINED USING CSV SETTINGS OF 050, 150, AND 120. CSV SETTINGS ARE INCORRECT AND SHOULD BE 050, 150, AND 250. ALL OTHER PARAGRAPHS RELATING TO CSV SETTINGS FOR LAUNCH VALVE STROKE TIMER TIMES CONFIRM THIS ERROR.
M. REC: CHANGE THE 120 SETTING TO READ 250.
N. POC: R.T. LAUNCHVALVE, LT, ALRE MAINTENANCE OFFICER, DEPLOYED.//

Figure 11-11. Sample CAT I ALRE Technical Publications Deficiency Report Message

TECHNICAL PUBLICATIONS DEFICIENCY REPORT

NAVAIRTECHSERVFAC USE ONLY	a. QA SEQUENCE NO.	b. DATA MANAGER CODE	c. CFA/PRIME CODE

1. REPORTING ACTIVITY	2. REPORT CONTROL NUMBER		
USS Ship (CVN-00) V-2 DIVISION FPO AP 96600-0000		3. REPORT DATE (YRMODA) 950201	4. WEAPON SYSTEM APPLICATION MK 7 MOD 0 JBD	5. DISCREPANCY CODE L
	N03300958032			

6. TECHNICAL MANUAL NUMBER	7. TECH. MAN. DATE	8. CHG. NO. & DATE	9. W/P NO.
51-70-3	810701	900401	

10. SEC/PG NO.	11. PARA. NO.	12. FIG/TBL NO.	13. CART. NO.	14. CART. DATE	15. FRAME NO.
11-15	N/A	11-3			

16. DEFICIENCY

Figure 11-3, shows a pin with a reference number of 13, it also shows a bearing with a reference number of 13. the correct reference number for the pin is 3.

(NOTE 1: BLOCKS a, b, and c (AT TOP RIGHT) ARE NOT FILLED IN BY REPORT ORIGINATOR.)

(NOTE 2: SHADED BLOCKS ARE NOT USED WHEN SUBMITTING CAT II TPDRs FOR ALRE "QA" OR ALRE "C" CARDS.)

(NOTE 3: SUBMIT A COPY OF ALL CAT II ALRE TPDRs TO THE COGNIZANT TYPE COMMANDER.)

17. RECOMMENDATIONS

Change the reference number of the pin from 13 to 3.

SAMPLE

18. IMPACT

19. MEDIA EVALUATED: (*Only one check block is required per item*)
☐ FILM ☐ PAPER ☐ PAPER & FILM

REMARKS

20. REPORTED BY (Name, rank/rate)	AUTOVON	21. RELEASED BY (*Name, rank/rate*)	AUTOVON
Schipper, J.M., AZC(AW/SW)	555-1234	Sawvell, R.A., LT	555-1234

OPNAV 4790/66 (REV. 5-88) S/N 0107-LF-002-4400 INSTRUCTIONS ON REVERSE SIDE

Figure 11-12. ALRE Technical Publications Deficiency Report (TPDR)(OPNAV 4790/66) (Front)

INSTRUCTIONS

1. FROM: (Reporting Activity) The Reporting Activity will enter complete mailing address.

2. REPORT CONTROL NUMBER: Enter the Report Control Number (RCN).

3. REPORT DATE: This identifies the year, month, and the day that the report was prepared, and consists of six digits. The date 15 June 1989 would be presented in the following format: 890615. The first two digits indicating the year (89), the second two digits indicate the month (06), and the remaining two digits specify the day (15).

4. WEAPON SYSTEM APPLICATION: Give the specific weapon system against which the deficiency is detected.

5. DISCREPANCY CODE: This is a numeric code used to describe the type of discrepancy found in the technical publication being reported deficient. A complete list of codes are as follows:

1. Typographical Errors
2. Incorrect Procedures
3. Schematic Errors
4. Part Number Errors
5. SM&R Code Errors
6. Illustration Errors
7. Incorrect Values/Tolerances
8. Incorrect References
9. Safety (Caution & Warnings)
10. Indexing Problems
11. Illegible
12. Print Error (Head to Toe or information cut off)
13. Missing/Improperly Collated Pages
14. Film Density
15. Cartridge Loading (Wrong Film, Cartridge Indexing, No Film, and Inverted Loading)
16. Other

6. TECHNICAL MANUAL NUMBER: Give the complete NAVAIR number assigned to the manual being reported as deficient. Only one Technical Manual should be reported per TPDR.

7. TECHNICAL MANUAL DATE: This date appears on the bottom right hand corner of the title page. The date shall be presented in the format described in Item 3.

8. CHANGE NUMBER AND DATE: This appears directly under the basic date of the manual on which the deficiency is located. Present date in same format as item 3.

9. WORK PACKAGE NUMBER: Enter the number in which the deficiency is located.

10. SECTION/PAGE NUMBER: Enter the number of the page of the technical manual on which the deficiency is located.

11. PARAGRAPH NUMBER: Enter the specific number in which the deficiency is located.

12. FIGURE/TABLE: Enter when an illustration or table is involved in the deficiency.

13. CARTRIDGE NUMBER: Enter the number being reported deficient.

14. CARTRIDGE DATE: The date shall be presented in the format described in Item 3.

15. FRAME NUMBER: Enter the frame number of the cartridge on which the deficiency is located.

16. DEFICIENCY: Be very specific. Provide complete information regarding discrepancy, including drawings, schematics, sketches, and references. If necessary, attach copies.

17. RECOMMENDATION: Be very specific. Provide complete information regarding the corrective action required, including drawings, schematics, sketches, and references, If necessary, attach copies.

18. IMPACT: Enter concise statement of the impact of this discrepancy on work load/operational readiness.

19. MEDIA EVALUATED: Check applicable block for media that is being reported deficient.

20. REPORTED BY: Give name, rate/rank, and autovon number of person reporting deficiency to ensure receipt by reporter of notification of action taken.

21. RELEASED BY: Name, rank/rate, title, and autovon number of releasing official.

MAIL ORIGINAL AND 1 COPY TO:
Commanding Officer, Naval Air Technical Service Facility, Quality Assurance Dept (40)
700 Robbins Ave., Phila., PA 19111-5097
COPY TO COGNIZANT FIELD ACTIVITY

OPNAV 4790/66 (REV. 5-88) (BACK)

Figure 11-13. ALRE Technical Publications Deficiency Report (TPDR)(OPNAV 4790/66) (Back)

(Insert Classif. of TMDER Here and At Bottom of Page) CLASSIFICATION:

NAVSEA (USER) TECHNICAL MANUAL DEFICIENCY/EVALUATION REPORT (TMDER)
(NAVSEA S0005-AA-GYD-030/TMMP & NAVSEAINST 4160.3A)

INSTRUCTION: Continue on 8-1/2" paper if additional space is needed.

1. USE THIS REPORT TO INDICATE DEFICIENCIES, PROBLEMS, AND RECOMMENDATIONS RELATING TO PUBLICATION.
2. BLOCKS MARKED WITH "*" ARE TO BE FILLED IN BY THE CONTRACTOR BEFORE PRINTING.
3. FOR UNCLASSIFIED TMDERS, FILL IN YOUR RETURN ADDRESS IN SPACE PROVIDED ON THE BACK, FOLD and TAPE WHERE INDICATED, AND MAIL. (SEE OPNAVINST 5510.1H FOR MAILING CLASSIFIED TMDERS.)
4. FOR ADDITIONAL INFORMATION, CALL AUTOVON 551-2976/2968 OR COMMERCIAL 805-982-2976/2968.

1. NAVSEA TECHNICAL MANUAL NO.*	2. VOL. PART*	3. TITLE*

4. REV. NO./DATE OR TM CH. NO./DATE	5. SYSTEM/EQUIPMENT NOMENCLATURE	6. SYSTEM/EQUIPMENT IDENTIFICATION (MK/MOD/AN/PART NO.)

7. USER'S EVALUATION OF MANUAL (Check Appropriate Blocks)

	A. EXCELLENT		B. GOOD		C. FAIR		D. POOR		E. COMPLETE		F. INCOMPLETE

8. GENERAL COMMENTS

9. RECOMMENDED CHANGES TO PUBLICATION

PAGE NO. A.	PARA-GRAPH B.	LINE NO. C.	FIG. NO. D.	TABLE E.	F. RECOMMENDED CHANGES AND REASONS TYPE OF PROBLEM (INDICATE SAFETY (S), MAJOR (M), OR MINOR (P))
					SAMPLE

10. ORIGINATOR'S NAME AND WORK CENTER (Please Print)	11. SIGNATURE OF 3-M COORDINATOR	12. DATE SIGNED	13. AUTOVON/ COMM. NO.

14. SHIP HULL NO. AND/OR STATION ADDRESS (DO NOT ABBREVIATE)

15. THIS SPACE ONLY FOR NSDSA

A. CONTROL NO.	B. COG ISEA	C. DATE			D. PRIORITY	E. TRANSMITTED TO
		RECEIVED	FORWARDED	DUE		

NAVSEA 4160/1 (Rev. 10-89) (FRONT) (REPLACES NAVSEA 9086/10, DESTROY STOCK)

Figure 11-14. Technical Manual Deficiency/Evaluation Report (TMDER) (NAVSEA 4160/1) (Rev 10-89)

Report	Criteria	Precedence	When to send
ALRE HMR	1. Part malfunctions or fails; may cause injury or death, or damage to or/loss of aircraft, equipment or facilities. 2. Configuration deficiency is a safety hazard. 3. Urgent assistance required; corrective action needed because of operational requirement. 4. Condition detected allows incorrect installation; system malfunction/failure may occur.	PRIORTY	Within 24 hours after discovery.
ALRE EI	1. Safety is involved. 2. Additional technical or engineering info for an aircraft mishap investigation. 3. Launch/recovery systems readiness impaired by material reliability. 4. When directed by higher authority	ROUTINE	Within 3 calendar days after discovery.
ALRE HMR/EI	1. Combination of ALRE HMR and ALRE EI criteria. 2. Safety concerns should be emphasized when submitting this combined report.	PRIORITY	Within 24 hours after discovery.
CAT I ALRE QDR	1. New or newly reworked component. 2. Affects safety including injury or death; can cause equipment damage.	PRIORITY	Within 24 hours after discovery.
CAT II ALRE QDR	1. Component may cause widespread material or human resource impact. 2. Does not meet criteria for a CAT I ALRE QDR.	ROUTINE	Within 3 calendar days after discovery.
CAT I ALRE TPDR	1. Publication deficiency which may cause injury/death or damage equipment.	PRIORITY	Within 24 hours after discovery.
CAT II ALRE TPDR	1. Does not meet criteria for a CAT I ALRE TPDR.	ROUTINE (OPNAV 4790/66)	Within 10 working days after discovery.

Figure 11-15. ALRE Discrepancy Reports Matrix

REPORT TYPE	FST ACKNOWLEDGEMENT /RISK ASESSMENT	GO/NO-GO DECISION	FOLLOW-UP FOR EXHIBIT	ACKNOWLEDGE EXHIBIT RECEIPT	INTERIM RESPONSE	FINAL RESPONSE CONCLUSION
HMR	1 DAY	3 DAYS	4-8 DAYS AFTER INITIAL REPONSE	1 DAY	10 DAY	30 DAYS
EI	1 DAY	3 DAYS	4-8 DAYS AFTER INITIAL REPONSE	1 DAY	1 DAY	30 DAYS
HMR/EI	1 DAY	3 DAYS	4-8 DAYS AFTER INITIAL REPONSE	1 DAY	1 DAY	30 DAYS

REPORT TYPE	FORWARD INITIAL RESPONSE	REQUEST EXHIBIT FROM ORIGINATOR	FORWARD INTERIM, OR FINAL REPLY TO SCREENING POINT
QDR CAT I	1 DAY FROM RECEIPT OF CAT I QDR	5 DAYS FROM RECEIPT OF CAT I QDR	20 DAYS FROM RECEIPT OF CAT I QDR OR MATERIAL
QDR CAT II	3 DAYS FROM RECEIPT OF CAT II QDR	10 DAYS FROM RECEIPT OF CAT II QDR	30 DAYS FROM RECEIPT OF CAT II QDR OR MATERIAL

Figure 11-16. ALRE Fleet Support Team Response Matrix

PRODUCT QUALITY DEFICIENCY REPORT EXHIBIT

1. REPORT CONTROL NUMBER	2. DATE (*YYYY/MM/DD*)		3. ORIGINATING ACTIVITY
4. NSN	5. PART NO.		6. SERIAL/LOT/BATCH NO.
7. CONTRACT NO.	8. QTY RECEIVED	9.QTY DEFICIENT	10. ITEM DESCRIPTION
11. COMPLAINT NARRATIVE – WHAT IS WRONG (*Continued on back if necessary)*			
12. NAME (*Last, First, Middle Initial)*		13. TELEPHONE (*Include area code)*	

DD FORM 2332, JAN 1999 **PREVIOUS EDITION MAY BE USED** **WHS/DIOR, Jan 99**

PRODUCT OUALITY DEFICIENCY REPORT EXHIBIT

14. SCREENING POINT/DEPOT	
15. DATE EXHIBIT RELEASED (*YYYYMMDD)*	16. EXHIBIT RELEASED TO
11. COMPLAINT NARRATIVE (*Continued)* AND REMARKS	

DD FORM 2332, (BACK), JAN 1999

Figure 11-17. Product Quality Deficiency Report Exhibit

Chapter 12 - ALRE Maintenance Support

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Chapter 12

ALRE MAINTENANCE SUPPORT

12.1 Mission.

The Maintenance Support (MS) work center of V-2 division is a key element in the day-to-day successful operation of Aircraft Launch and Recovery Equipment (ALRE). MS is fundamental to the ALRE maintenance organization in that it establishes a single point of maintenance expertise tempered with flexibility and capability. The heart of the MS work center is a group of experienced personnel who possess the requisite NEC necessary to be a maintenance technician. Together with catapult Electrician's Mates and tool control personnel, they make up the MS work center. Their extensive training and background provide the required skills and knowledge to maintain ALRE equipment in a fully operational and safe status.

12.2 Organization.

Figure 12-1 reflects the MS work center organization in V-2 division. The MS Chief/Senior Chief Petty Officer (CPO/SCPO), (MS00), is responsible directly to the ALRE maintenance officer, through the ALRE maintenance CPO, for all functions associated with assigned maintenance responsibilities. The MS CPO/SCPO shall possess the requisite NEC of a maintenance technician and be designated in writing by the air officer. Two team leaders support the MS CPO/SCPO.

12.2.1 The maintenance support team leader functions as the VB22 work center supervisor. When tasked, he/she may perform various maintenance actions independent from the primary work center supervisor or work to assist the primary work center. He/she is further tasked with the supervision of tool control center. His/her designation is MS01 and he/she shall possess the requisite NEC of a maintenance technician and be designated in writing by the air officer.

12.2.2 The catapult electrician team leader supervises the Electrician's Mates assigned to the MS work center and shall possess the requisite NEC and be designated in writing by the air officer.

12.2.3 As illustrated in Figure 12-1, maintenance support technicians, with the requisite NEC 7006, shall fill all MS00 through MS07 billets.

12.2.4 The V-2 division tool control center will be manned to a level as directed by the ALRE Maintenance Officer. They will work

directly for the MS Support Team Leader and may be utilized as assistants to the designated maintenance technicians.

12.3 Responsibilities.

Maintenance Support will primarily function during non-operational hours. They may augment primary work center personnel or in many instances serve as the full maintenance crew in order to allow for sufficient crew rest of primary work center personnel. At the ALRE Maintenance Officer's discretion, MS may perform maintenance in the absence of the primary work center supervisor. Under no circumstances will MS be allowed to function any equipment whether related to pre-operational inspections or not without the express permission and under the direct supervision of the primary work center supervisor. Specific examples include but are not limited to:

---Arresting gear engine function
---Sheave Damper function
---Barricade stanchion function
---Power pack relief valve function
---pole checks
---cycle launch valves
---function grab (with RRE)
---JBD function
---NGL function
---deck tensioner function
---steam smothering test
---run water brakes
---operate any remote panels
---conduct no-loads

Because MS is primarily a maintenance work center, great care must be taken to ensure that all operational/functional requirements are carried out by qualified personnel under the direct supervision of the primary work center supervisor.

12.3.1 The ALRE Maintenance Officer retains the responsibility to determine job assignment. This decision is normally made through maintenance control with work center supervisor inputs. On those tasks where MS will augment the primary work center, the MS team leader shall report to the primary work center supervisor and assist in coordinating all aspects of the job including coordinating QA and material requirements, MAF completion and keeping all parties appraised of work progress. On those tasks where the MS supervisor will act independently from the work center supervisor, the MS supervisor shall coordinate all requirements and be responsible for providing job progress information.

NOTE

In those instances where MS will act independently from the primary work center supervisor, an understanding of complete and thorough communication will be fostered by both supervisors. Communication between each during the planning stage of maintenance actions and thorough debriefs following the conclusion of maintenance actions is mandatory. Face to face turnovers will be the norm. The most minute and unique details of maintenance actions will be brought to the attention of the primary work center supervisor. No detail, regardless of how minor, will be excluded from this debrief.

12.3.2 The MS W/C CPO, under direction of the ALRE maintenance officer and/or maintenance control supervisor, is responsible for normal work center administration functions and assignment of MS personnel to specific maintenance tasks. When MS is acting independently from the primary work center supervisor, the MS CPO will assume those duties normally performed by the primary work center CPO. As with the MS team leader and primary work center supervisor, the MS CPO and primary work center CPO, will have a face to face turnover discussing all details of the work performed by MS.

12.3.3 MS efforts are primarily to provide support to operating work centers. Documentation of both the primary work center and MS's man hours shall be documented on a MAF. In those instances where MS is conducting maintenance independent from the primary work center, the Maintenance Support Team Leader (MS01) shall provide sufficient documentation to the primary work center supervisor to enable him to complete MAFs. Additionally, MS will track its own man-hours independently.

12.4 Maintenance Procedures

12.4.1 Failure to follow correct maintenance procedures used in the assembly or disassembly of components or subassemblies inevitably results in further problems. Failure to use the proper technical manual, TD, or aperture card; use of the wrong tools and/or improper procedures frequently creates additional problems. The urgency and criticality of the job often leads to hurried, quick-reaction repairs without adequate review of the situation. Standard procedures will include the proper use of technical manuals, TDs, aperture cards, and other technical data to ensure that adequate and complete maintenance is performed. MS is the established base of professional expertise which ensures that proper and complete maintenance evolutions become standard operating procedures, backed by quality assurance inspections.

12.5 ALRE Tool Control Program (TCP)

12.5.1 The TCP provides a means to rapidly account for all tools after completing a maintenance task, thus reducing the potential for Foreign Object Damage (FOD) mishaps. The TCP is based on accuracy of inventory. The most significant benefit of the TCP is the saving of lives and equipment damage by eliminating tool-induced FOD incidents caused by lost tools. Additional benefits are:

a. Reduced initial outfitting and tool replacement costs.

b. Reduced tool pilferage.

c. Reduced man-hours required to complete each maintenance task.

d. Assurance that proper tools are available for specific maintenance tasks.

12.5.2 NAVAIRWARCENACDIV Lakehurst is assigned responsibility for the ALRE TCP and will maintain a standard Tool Control Plan (TCPL) for all type catapults, arresting gear and visual landing aids. NAVAIRWARCENACDIV Lakehurst Miscellaneous Report 51-OR732 (ALRE Tool Control Manual) (NOTAL), contains amplifying information on this subject including the following:

a. An allowance list for tool containers.

b. A standard tool list and layout diagram for each container.

c. Procurement information for tool containers and other associated hardware.

12.5.2.1 COMNAVAIRLANT and COMNAVAIRPAC will implement the TCPL aboard their respective ships.

12.5.2.2 The ALRE maintenance officer shall establish a V-2 division tool control center which will be a responsibility of the MS Team Leader. The tool control center functions are as follows:

a. Use standardized tool lists to build and maintain V-2 tool containers as specified in the TCPL. Such tool lists shall be utilized in the conduct of an initial wall-to-wall inventory upon implementation of the TCP, and during TYCOM ALRE Maintenance Management Team audits.

NOTE

ALRE special tools are also subject to examination during the TYCOM Maintenance Management Team audits.

b. Whenever possible, use approved allowance lists as the reference manual for tool requisitions. Report errors in approved allowance lists, to NAVAIRWARCENACDIV Lakehurst.

c. Initiate all requisitions for initial issue/replacement tools.

d. Ensure all tool requests are itemized, and all requisitions are itemized. Blank check DD 1348 requisitions are not authorized.

e. Ensure that all tool expenditures are recorded.

f. Maintain custody of all tool containers not signed out on sub-custody.

g. Require a signature to issue tool containers.

h. Require a signature to issue individual tools.

i. Issue initial issue and replacement tools; require turn-in of broken tools for all replacements.

j. Ensure all tools and containers are properly marked/etched and appropriate inventory procedures maintained.

k. Bring noted deficiencies and desired changes to the attention of the MS CPO.

12.5.3 Tool Control Containers

12.5.3.1 The silhouette method in conjunction with the inventory list method will be utilized for tool cabinets. The inventory list method is required for portable toolboxes and tool pouches for accountability of all tools.

12.5.3.2 A standardized tool list is specified in the TCPL for each type and model ALRE and includes a sufficient quantity of the necessary tools to perform the assigned maintenance tasks. The tool list will show the specific tool inventory required for each container.

12.5.3.3 A unique family of tool containers is designated for tool control. Tools listed in the TCPL shall be displayed in accordance with drawings therein. The container exterior will clearly identify the work center/work package and organization. The tools

within the containers shall be identified to comply with the TCPL and have the organization etched on the tool.

NOTE

ALRE maintenance officers may tailor the contents of individual tool boxes to conform to their ship's equipment maintenance requirements. All other requirements of the Tool Control Manual remain in effect.

12.5.3.4 Silhouetting has proved ineffective in identifying missing tools from portable tool boxes, particularly at night. Therefore, an inventory list shall be provided in each portable toolbox.

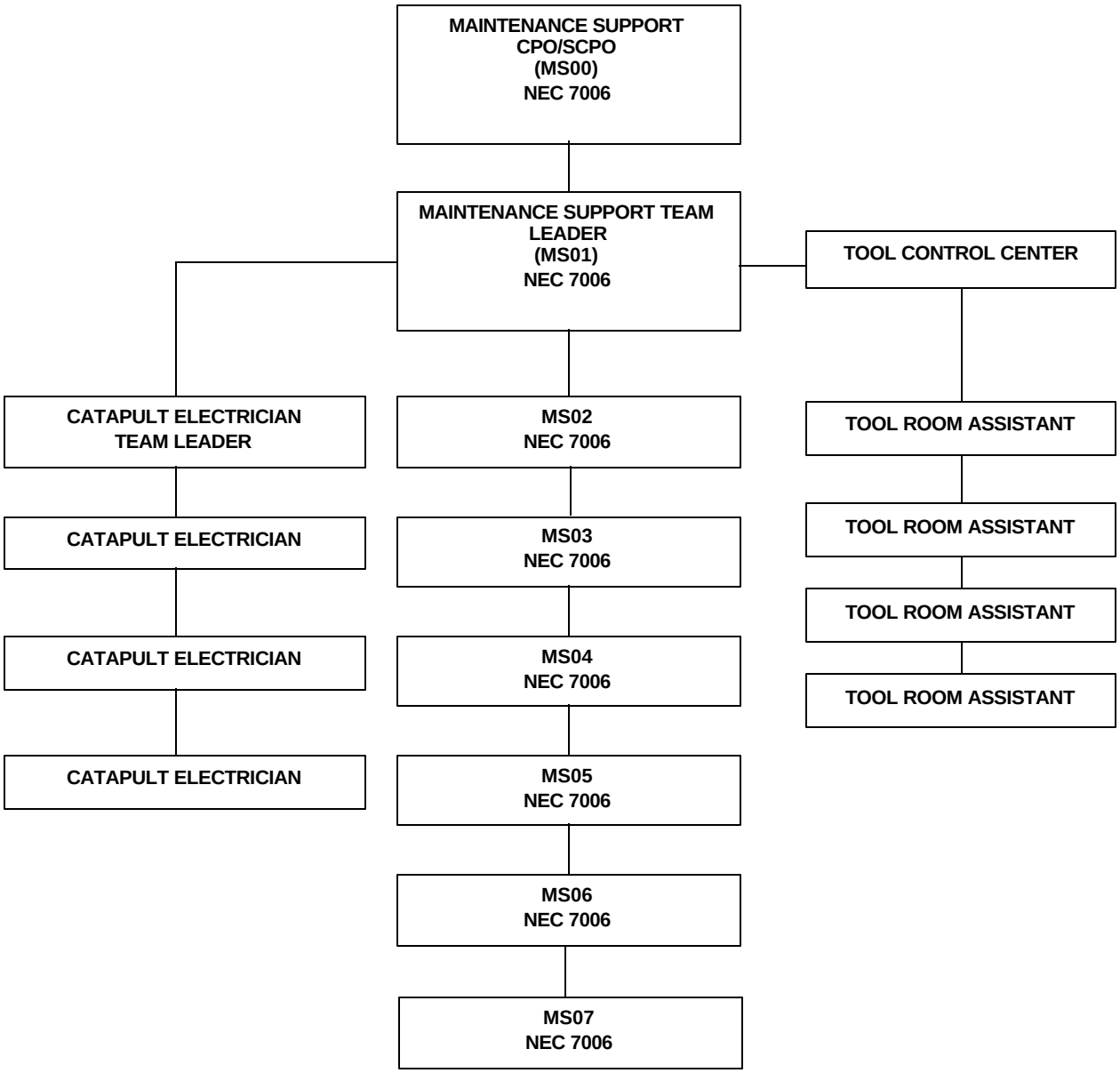

Figure 12-1. Maintenance Support Organization

Chapter 13 - ALRE Maintenance Organizations & Responsibilities

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Chapter 13

ALRE Maintenance Organizations and Responsibilities

13.1 Shipboard Procedures

13.1.1 The commanding officer is responsible to ensure correction of material problems at the lowest possible maintenance level. Maintenance accomplishment shall be in the following priority:

a. When maintenance is within the capacity and capability of ship's force, V-2 division will accomplish it.

b. CV/CVN aircraft intermediate maintenance departments (AIMDs), tenders, repair ships, and Shore Intermediate Maintenance Activities (SIMAs) have the ability to undertake work which is beyond the capacity and/or capability of the V-2 division. Ships are encouraged to use these facilities to the maximum extent possible.

c. Naval/private shipyards and naval aviation depots (NAVAVNDEPOTs) and Naval Air Warfare Center Aircraft Division Lakehurst NJ (NAVAIRWARCENACDIV) perform work beyond the capability/capacity of ship's force and SIMAs.

13.1.2 Alterations shall not be accomplished unless properly authorized.

13.1.3 The responsibility for the inspection of work performed by industrial activities is assigned to ship's commanding officers by Navy Regulations.

13.1.4 When the ship’s V-2 division cannot accomplish ALRE maintenance, maintenance assistance should first be sought from the CV/CVN's IMA. The ALRE maintenance officer seeks higher-level maintenance assistance through the ship's maintenance manager, using a properly authorized Work Request (OPNAV 4790/2K or 4790/2R). The ALRE maintenance officer ensures that all work that must be deferred by V-2 division is entered into the CSMP. The CV/CVN maintenance manager brokers the work by attempting to obtain maintenance services from either the engineering department (such as emergency parts manufacture from the repair division) or AIMD (calibration, non-destructive inspection (NDI), etc.) before forwarding the Work Request to the type commander. Since AIMD is under the Aviation 3-M System, maintenance support from that department is requested using a VIDS/MAF (OPNAV 4790/60). Documentation of maintenance completed by the AIMD is the responsibility of the ALRE maintenance officer. A copy of the VIDS/MAF must be attached to the completed ALRE MAF.

13.1.5 The Ships' Maintenance and Material Management (3-M) System shall be implemented and updated through careful planning by individual ships and critical study by responsible commanders so that material readiness will be maximized and that the time and expense required for maintenance availabilities are reduced to a minimum. A current and accurate Current Ship Maintenance Project (CSMP) is the basic foundation to any maintenance program.

13.1.5.1 The Planned Maintenance System (PMS) defines the minimum scheduled planned maintenance to be carried out on board an individual ship, and will be used to the maximum degree possible.

13.1.6 Skilled ALRE maintenance personnel are scarce and must be utilized in actual maintenance and technical management. Skilled personnel shall not normally be diverted to supply support or administrative functions.

13.2 Type Commanders (TYCOMs)

13.2.1 The Commanders, Naval Air Force, U.S. Atlantic/Pacific Fleets (COMNAVAIRLANT/PAC) are responsible for determining ALRE maintenance requirements to be developed in geographic support areas. This includes identification of ALRE maintenance requirements for SIMAs, assistance in establishing manning levels, development of coordinating documents (memoranda of agreement) and coordination between surface and air communities to support the ALREMP.

13.2.2 Commander, Naval Air Force, U.S. Atlantic/Pacific Fleet (COMNAVAIRLANT/COMNAVAIRPAC) maintenance policy is to maintain aircraft carriers (CV/CVNs) in a state of material readiness that will assure the highest possible degree of operational readiness for all contingencies, consistent with the availability of resources. Responsibilities for overall maintenance of CV/CVNs are defined in Chapter 7, U.S. Navy Regulations, Fleet Regulations, and various TYCOM Directives as appropriate.

13.2.3 The COMNAVAIRLANT ALRE maintenance organization is shown in figure 13-1, and the COMNAVAIRPAC Ship Material organization (Code N43) is depicted in figure 13-2. These organizations provide total ship project/material management functions and force-wide technical direction for ship material maintenance.

13.2.4 The COMNAVAIRLANT Ships Installations (SI) Officer (Code N433)and the COMNAVAIRPAC (SI)Air Systems Officer (Code N435) are responsible for monitoring the maintenance and material condition of all ALRE systems under their cognizance. They screen, control, and direct work and funding for all catapult, arresting gear, and

visual landing aid systems under their cognizance. These systems officers are responsible for the following actions:

a. Screening and distributing all ALRE related work requests to Readiness Support Group (RSGs), Regional Maintenance Center (RMCs), shipyards, Naval Ship Repair Facilities (NAVSHIPREPFACs), Naval Aviation Depots (NAVAVNDEPOTs), or Naval Air Warfare Center Aircraft Division(NAVAIRWARCENACDIV) and notifying the ship of maintenance action screening disposition.

b. Screening and coordinating all ALRE maintenance/material message traffic.

c. Reviewing CSMP on a recurring basis.

d. Attending all meetings/conferences on maintenance/material matters (e.g., work definition conferences (WDCs)).

e. Reviewing required ALRE SHIPALTs.

f. Screening all ALRE maintenance/material Casualty Reports (CASREPs).

g. Coordinating all ALRE maintenance/material requirements with the ship's maintenance manager for inclusion in the integrated work package.

h. Coordinating Fleet Modernization Program (FMP) ALRE planning with SUPSHIP Newport News Code 1800.

i. Ensuring NAVAIRWARCENACDIV Lakehurst Carrier and Field Services Unit (CAFSU) technical assistance is provided to fleet units and industrial activities.

j. Coordinate scheduling of NAVAVNDEPOT/NAVAIRWARCENACDIV Voyage Repair Teams (VRTs) who perform ALRE systems maintenance and repair.

13.3 Intermediate Maintenance Activities (IMAs)

13.3.1 An IMA comprises all departmental/organizational units responsible for providing maintenance support to supported units, whether ashore or afloat. The Navy ship is a unique entity in that responsibility for both operation and maintenance rests with the ship itself. The ship's V-2 division has the primary responsibility for operating and maintaining a CV/CVN's ALRE systems. As a measure of the CV/CVN's self-sufficiency, each carrier is designated, by OPNAVINST 4700.7J, an IMA, comprised of

the aircraft intermediate maintenance department (AIMD), engineering, supply, and weapons departments. The CV/CVN AIMD will provide appropriate ALRE maintenance support, where capability and capacity exist.

13.3.2 SIMAs are responsible for performing maintenance functions on ships, ship's equipment, and other systems of the supported activities as directed by the TYCOMs.

13.3.2.1 SIMA repair capabilities are designed to provide ALRE maintenance support to the CV/CVN air department. Repair capabilities and potential may be modified to meet expanded requirements. SIMAs, performing ALRE maintenance shall:

a. Ensure that quality control is exercised in the accomplishment of every job.

b. Keep customer ships fully apprised of the status of all work accepted.

c. Inform the TYCOM of any ALRE maintenance related matters/problems that cannot be resolved at the ship/SIMA level.

13.3.2.3 ALRE work requested from a SIMA will be submitted in accordance with OPNAVINST 4790.4C (NOTAL) and TYCOM directives. Work is normally programmed during specified availability periods but may be requested at anytime, with TYCOM approval. Scheduled availability periods will be preceded by a work definition conference (WDC) to discuss screening, services, problem areas, and to establish the basic procedures for SIMA efforts. Work requests are submitted to the TYCOM for approval prior to the availability period, with additional work approved on a case-by-case basis.

13.3.3 The Commercial Industrial Services (CIS) Program is designed to provide a means of accomplishing that ship's work which is beyond the capacity, but within the capability, of Fleet IMAs. CIS may also be used to reduce working hours of fleet personnel by having contractors accomplish selected maintenance.

13.4 Depot Industrial Functions

13.4.1 ALRE depot maintenance provides technical help in carrying out those functions that are beyond the responsibility or capability of the shipboard maintenance organizations. Large-scale maintenance and repairs are usually performed during overhaul and availability periods with approved alterations and modifications also being accomplished. Industrial establishments may be any combination of government or contractor owned and operated. These facilities include Naval shipyards (NAVSHIPYDs), private shipyards,

Naval Ship Repair Facilities (NAVSHIPREPFACs), Naval Aviation Depots (NAVAVNDEPOTs)/Naval Air Warfare Center Industrial (NAVAIRWARCENACDIV/PMD) Lakehurst Voyage Repair Teams (VRTs), and private contractors.

13.4.2 As implemented within the Department of the Navy (DON), depot industrial functions consist of three general categories:

a. Those involved in the maintenance or modification of existing ship installed ALRE end items, systems, components, and support equipment.

b. Those involved in the manufacture of items and component parts not otherwise available.

c. Those involved in support services functions that include professional engineering, technological, and calibration services.

13.4.2.1 Depot maintenance functions are required to maintain or restore the designed service levels of performance, reliability, and material condition; they include complete rebuild through reclamation, refurbishment, overhaul, repair, replacement, adjustment, servicing, and replacement of system consumables. They also include inspection, calibration, and testing.

13.4.2.2 Depot modification functions are required to change or improve design levels of performance, reliability, and material condition. The term modification, as used in this instruction, includes alterations, conversion, engineering changes, and modernization.

13.4.3 NAVAVNDEPOT/NAVAIRWARCENACDIVs are the Navy's primary aviation industrial establishments for ALRE repair. NAVAVNDEPOT/NAVAIRWARCENACDIVs are responsible for:

a. Ensuring compliance with controlling directives from higher authority concerning policies, procedures, workload, funding, organization, staffing and facilities.

b. Ensuring that production output of the establishment is timely and of proper quantity and quality.

c. Performing depot maintenance on ships' installed ALRE.

d. Providing Type III (Type I and II in certain instances) Navy Calibration Laboratory (NAVCALAB) facilities.

13.4.3.1 NAVAVNDEPOT/NAVAIRWARCENACDIV Voyage Repair Teams (VRTs) are small groups of shipyard trade specialists cross-trained and

capable of functioning in two or more trades. All VRT personnel shall be trained to ALRE rework standards established by the NAVAIRWARCENACDIV Lakehurst. VRTs are established at the NAVAVNDEPOTs in North Island and NAVAIRWARCENACDIV DET Norfolk and Mayport. VRT personnel perform designated scheduled and unscheduled depot maintenance, repair, refurbishment, replacement, and modification tasks in direct support of NAVAIRSYSCOM shipboard and shore-based ALRE installations. Artisans are responsible for ensuring the quality assurance inspection of all work performed.

13.4.4 NAVSHIPYDs are shore activities of NAVSEASYSCOM. The NAVSHIPYDs located at Norfolk and Puget Sound furnish depot maintenance facilities and technical guidance for carrier availability's and overhaul periods. These industrial activities perform major repair, modifications, and overhauls to ALRE and are responsible for the proper installation, alteration, and test of this equipment in accordance with current drawings and directives.

13.4.5 The NAVAIRWARCENACDIV Lakehurst as the FST is responsible for research, engineering, development, test and evaluation, systems integration, limited production, procurement, overhaul/repair, and in-service engineering of ALRE. It also provides technical and logistics support to all activities in support of installation, operation, overhaul, maintenance, repair and certification inspections of ALRE, and provides representatives to the Board of Inspection and Survey (INSURV).

13.4.5.1 NAVAIRWARCENACDIV Lakehurst is the designated repair point (DRP) on selected ALRE (launch valves, Capacity Selector Valve etc.). In addition to ALRE overhaul and repair, it also can manufacture ALRE systems in limited quantities and is a source for ALRE spares and components which cannot be obtained by normal means.

13.5 Carrier and Field Service Unit (CAFSU)

13.5.1 CAFSU is under NAVAIRWARCENACDIV Lakehurst Fleet Technical Services. The CAFSU is comprised of civilian technicians who are highly skilled and thoroughly qualified in the operation, maintenance, repair, installation and test of ship- and shore-based aircraft launching, recovery and visual landing aids systems. As the technical representatives of the Type Commanders and NAVAIRWARCENACDIV Lakehurst, they are dispersed in field offices to provide immediate technical assistance to fleet personnel and industrial activities throughout the Atlantic and Pacific Fleet operating areas. CAFSU field offices are located at Naval Aviation Depot, North Island; Naval Stations Mayport; Bremerton, Norfolk, Portsmouth; Yokosuka Naval Ship Repair Facility, and Newport News NAVSHIPYD. The CAFSUs report to the NAVAIRWARCENACDIV Lakehurst

for administrative purposes and are under the joint operational control of their TYCOM and NAVAIRWARCENACDIV Lakehurst.

13.5.2 CAFSU is required to maintain technical liaison with the above commands and is responsible for providing all parties with timely technical information. CAFSU will provide technical assistance during complex overhauls, for all maintenance availabilities, and to ships not in a repair status. A CAFSU representative will monitor all shipyard repairs, modifications and operational tests of shipboard ALRE. All technical questions concerning this equipment will be directed to the local CAFSU representative. CAFSU will submit timely written reports concerning repairs, alterations, and work accomplished to the Type Commander (COMNAVAIRLANT Code N433 or COMNAVAIRPAC Code N435), NAVAIRWARCENACDIV Lakehurst, and to the ship's ALRE Maintenance Officer. CAFSU is the final authority for recommending or not recommending certification of all ALRE following overhaul and other times.

13.5.2.1 Commanding officers:

a. Request CAFSU technical assistance when required, by message, letter, or informal means from the TYCOM. In case of a formal request, direct an information copy to the local CAFSU field office.

b. Provide officer-equivalent berthing and messing facilities for CAFSU representatives when embarked.

c. Pass to COMNAVAIRLANT (Code N433)/COMNAVAIRPAC (Code N435) any comments concerning meritorious or substandard performance of CAFSU representatives.

d. Upon completion of a CAFSU assignment at sea, ensure timely departure from the ship.

13.5.2.2 NAVSHIPYDs and repair activities:

a. Provide support to CAFSU field offices, as appropriate, to allow for objective accomplishment.

b. Refer technical questions concerning launching, recovery, and visual landing aids equipment to a local CAFSU representative for timely resolution.

13.6 Overhauls and Availabilities

13.6.1 Large-scale ALRE maintenance and repairs requiring industrial facilities are performed during depot availability's.

Approved alterations and modifications that update and improve the ship's capabilities are also accomplished. Aircraft carriers are also assigned availabilities with afloat (tenders and repair ships) or shore IMAs. The following types of industrial availabilities are defined:

a. A COH/DPIA/RCOH is an overhaul/availability that, because of funds, time, or manpower constraints, or the complexity or interrelationship of the various ship subsystems affected by the overhaul or availability work packages, requires extraordinary coordination and extensive management of the planning and industrial phases of the overhaul/availability in order to produce a high level of confidence that the overhaul/availability will be satisfactorily completed.

b. A SRA/PIA is an availability for the accomplishment of repairs and selected alterations by depot and/or intermediate maintenance activities. SRA/PIAs are assigned to sustain the material condition of ships between overhauls, particularly those ships on extended operating cycles. During SRA/PIAs required depot level maintenance is executed on a progressive or incremental overhaul strategy. SRA/PIAs are short, labor-intensive availabilities that are generally scheduled at specific times throughout the operating cycle. They are scheduled sufficiently far in advance to ensure planning time and funds are effectively utilized. Following each extended deployment, a 4 or 6 month SRA/PIA will be scheduled for each CV/CVN in order to accomplish major repairs and high priority SHIPALTs.

c. Scheduled Upkeep is a minor repair period during a ships operational cycle where specific items of work by an industrial activity with the ship present. During an RAV, the ship is incapable of fully performing its assigned missions and tasks.

d. Voyage repair (VR) is emergency work necessary to enable a ship to continue its mission. VRs can be accomplished without requiring a change in the ship's operating schedule or changing the general steaming notice in effect.

13.6.2 The forward deployed CV employs the incremental selected restricted availability (ISRA), the(progressive maintenance)concept which consists of availability’s by ship repair facilities. All of forward deployed carrier’s availabilities are incrementally conducted in the Western Pacific (WESTPAC) area with the U.S. Naval Ship Repair Facility (NAVSHIPREPFAC) at Yokosuka, Japan.

13.6.2.1 COMNAVAIRPAC provides funds directly to NAVSHIPREPFAC Yokosuka for ALRE maintenance performed during availabilities at this activity.

13.6.2.2 Modernization of the forward-deployed CV is accomplished, as it is with the other ships of the force, with NAVSHIPREPFAC Yokosuka performing as the Planning Agent. Assistance and management of the modernization program is provided by SUPSHIP NNVA CODE 1800. Although SHIPALTs are accomplished during each availability, large alterations are usually deferred to an ISRA. Normal planning milestones and procedures are followed except that ISRAs are programmed starting with the beginning of each fiscal year.

13.7 Supervisor of Shipbuilding Newport News Code 1800 (SUPSHIP NNVA CODE 1800)

13.7.1 Supervisor of Shipbuilding, Conversion and Repair Newport News (Code 1800) is an extension of the NAVSEA Aircraft Carrier Program Office (PMS-312). SUPSHIP Code 1800 provides life cycle planning and engineering for repairs and alterations for aircraft carriers and integrates the requirements of various commands. It also manages the planning and engineering efforts for scheduled availabilities. SUPSHIP Code 1800 modernization planning assists COMNAVAIRSYSCOM, the COMNAVSEASYSCOM Aircraft Carrier Program Office, and the air TYCOMs in the execution of the advanced planning of ship alterations (SHIPALT). The Fleet Modernization Program (FMP), Title K, Title D SHIPALT and others such as Alteration Installation Team (AIT), etc., are used as the basis for alterations to be planned.

13.7.2 SUPSHIP Code 1800 prepares a modernization workbook for each major aircraft carrier availability which defines alteration work to be accomplished so that common understanding among Systems Commands, CNO, air TYCOMS, Ship's Force and NAVSHIPYDs as appropriate is assured. SHIPALT records are developed and tailored to a specific ship and enables the preparation of accurate estimates, identifies special and long lead-time material, and becomes the basic planning document for the industrial activity accomplishing the overhaul. SHIPALT records are usually based on a shipcheck.

13.7.3 In order for SUPSHIP Code 1800 to perform its planning functions, SUPSHIP Code 1800 shall be an information addressee on all correspondence affecting ship maintenance.

Mailing Address: Supervisor of Shipbuilding,
Conversion and Repair (Code 1800)
4101 Washington Ave., Bldg 2
Newport News, VA 23607-2787

Message Address: SUPSHIP NEWPORT NEWS VA//1800/1822//

13.8 Work Definition Conference (WDC)

13.8.1 The WDC is the most significant planning event preceding overhaul or availability. Its primary purpose is to establish the scope of repairs to be undertaken by the NSY for SUPSHIPS and to ensure that there is mutual understanding of all issues between all parties concerned. The WDC is normally conducted on board ship and includes key members of ship's force (i.e., commanding officer, executive officer, department heads, leading petty officers, work center supervisors), the TYCOM maintenance manager and SI Officer, SUPSHIP Code 1800, and the industrial repair activity. Alteration and repair package problems are resolved and screening decisions made about industrial and forces afloat repair packages with respect to available funds and Industrial/Ship's Force man-days.

13.8.2 A significant portion of the total work undertaken during scheduled overhauls and availability’s is screened to ship's force for accomplishment. This work must be planned and managed to ensure the most effective utilization of available time and manpower. The ship's force work package (SFWP) (items screened for ship's force accomplishment) is defined following decisions made at the WDC. Development of the SFWP should be based on the CSMP, giving consideration to anticipated manning requirements, leave schedules, required schools, available skill levels, fire watches, PMS requirements, housekeeping, shipyard work inspection requirements, normal watches and other duties.

13.8.3 A secondary purpose of the WDC is to discuss preparations which must be made before entering a private shipyard. Certain precautions or special preparations with regard to off-loading or storage of items may be required. These requirements should be determined during the WDC. SUPSHIPS has documented information on planning, conducting and completing SRAs. Any off-loading requirements unique to the location in which the ship will be repaired will be contained in this compilation of information. If the commanding officer has not received this information prior to the WDC, it should be requested during the conference.

13.9 Emergency Essential Repairs (EER)

13.9.1 After the final WDC, additional work for an availability will be considered for essential repairs. EERs will be submitted by message and must meet all the following criteria:

a. Not previously submitted.

b. Safe and reliable operation of the ship or equipment cannot be assured unless completed.

c. Must be completed during the current availability; would result in a CASREP if not corrected.

d. Are beyond the capability of ship's force and SIMA.

13.9.2 EER work requests may be submitted subsequent to fixed-price determination. Since they invariably result in greatly increased cost and may delay overhaul completion, every effort must be made to ensure that all foreseeable work items are identified and submitted prior to fixed-price determination. Items which do not meet the EER criteria should be listed in the ship's CSMP for correction during subsequent availability's.

13.9.3 Supplemental work requests and EER requests are not to be submitted for work that is presently authorized or should be corrected through the shipyard's discrepancy correction program.

13.10 Ship Installation (SI) Equipment Services Changes

13.10.1 SI service changes are issued for catapult, arresting gear, visual landing aids, and wind measuring systems under the technical cognizance of NAVAIRSYSCOM.

13.10.2 SI service changes designated for forces afloat accomplishment are authorized upon receipt of service change material kits provided by the TYCOM. Incidental material not provided in service change material kits will be requisitioned on a non-reimbursable basis or otherwise procured utilizing OPTAR funds. Commanding officers are encouraged to schedule the accomplishment of SI service changes as time, funds, material, and manpower permit.

13.10.3 Only the TYCOMs may authorize SI service changes designated for shipyard or Voyage Repair Team (VRT) accomplishment. Approximately 300 days before a shipyard availability, NAVAIRWARCENACDIV Lakehurst will forward to the industrial activity, via the TYCOM, a list of outstanding SI service changes. The TYCOM will review the list for applicability, material availability, status and priority. The list of SI service changes that are authorized and funded for accomplishment will then be forwarded to the repair activity, with a copy to the ship concerned. Responsibility for accomplishment of a forces afloat change by the industrial activity will be stated in the endorsement to the basic letter. Upon receipt of the NAVAIRWARCENACDIV Lakehurst 300-day letter, with TYCOM endorsement, commanding officers will advise the TYCOM by message, with the appropriate carrier group commander (COMCARGRU) as information addressee, within 2 weeks if any authorized SI service changes have been

completed or partially completed (stating what portions have been completed).

13.10.4 SI service changes which the TYCOM desires to be accomplished during scheduled post-deployment restricted availability's will be authorized concurrently with the authorization of SI equipment repairs.

13.10.5 Following major repairs or modifications, SI equipment must be tested to demonstrate proper performance capability.

13.10.6 All service changes approved for accomplishment by forces afloat shall be entered in the ship's CSMP until completed or canceled.

13.10.7 SI service change incorporation should be reported within 3 days of completion using OPNAV 4790/CK. Report completion to NAVAIRWARCENACDIV Lakehurst on the Form 1511 provided with the service change.

13.11 Unauthorized Alterations of Ships

13.11.1 Unauthorized alterations, rearrangements of ships, and deviations from ship class accomplished without specific written approval of higher authority exist among ships of the same class. These minor or major unauthorized changes include actual rearrangement of spaces, joiner bulkheads, and equipment to suit the desires of a particular ship's force which make logistic support difficult and may cause unsafe conditions. Therefore, commanding officers shall ensure that no alterations or rearrangements are made unless specifically approved and authorized by appropriate authority. Unapproved alterations or rearrangements shall be submitted into the ship's CSMP citing the letter reference which requests approval and listing UNAUTH in the alteration number authority block.

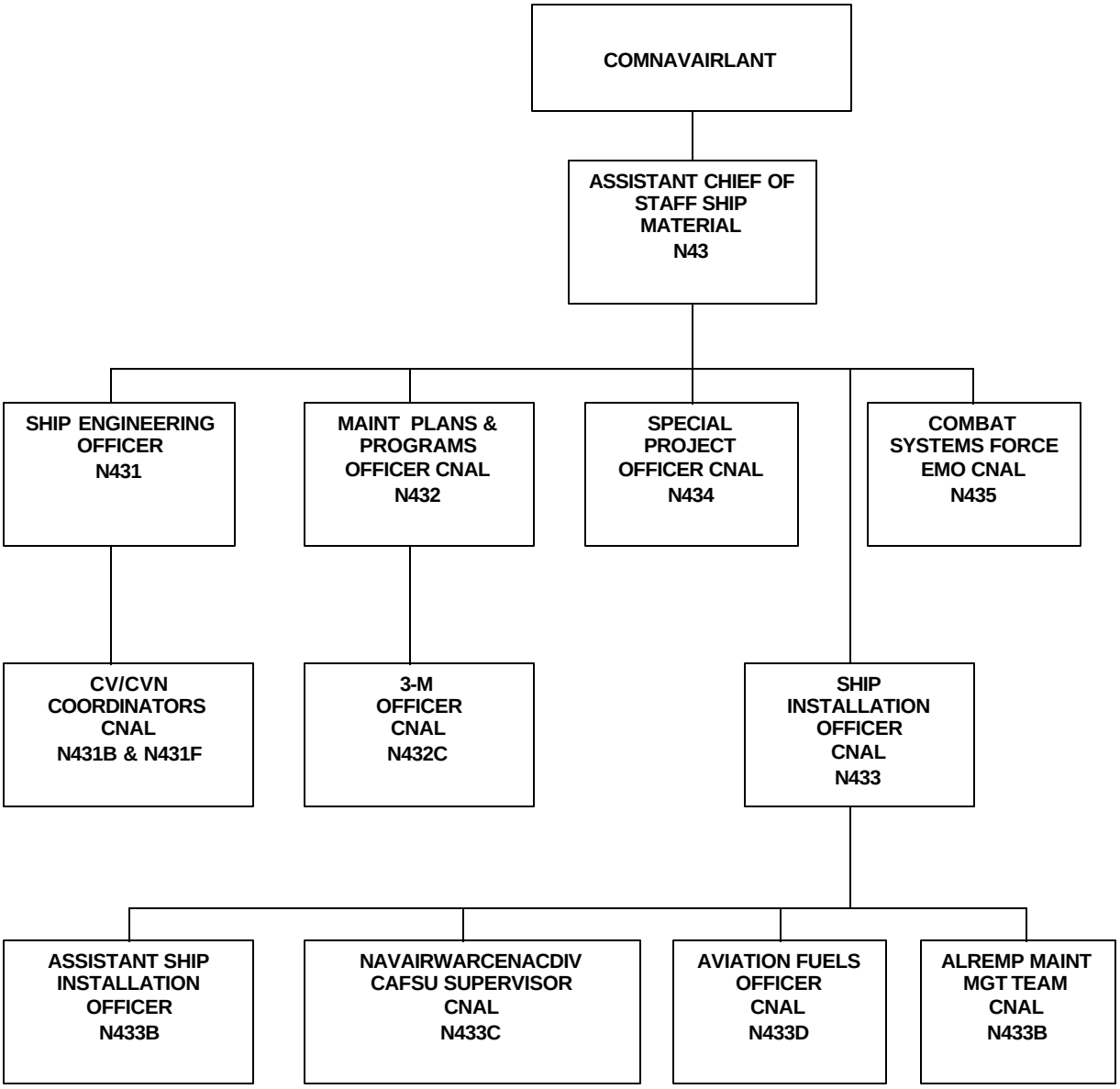

Figure 13-1. COMNAVAIRLANT ALRE Maintenance Organization

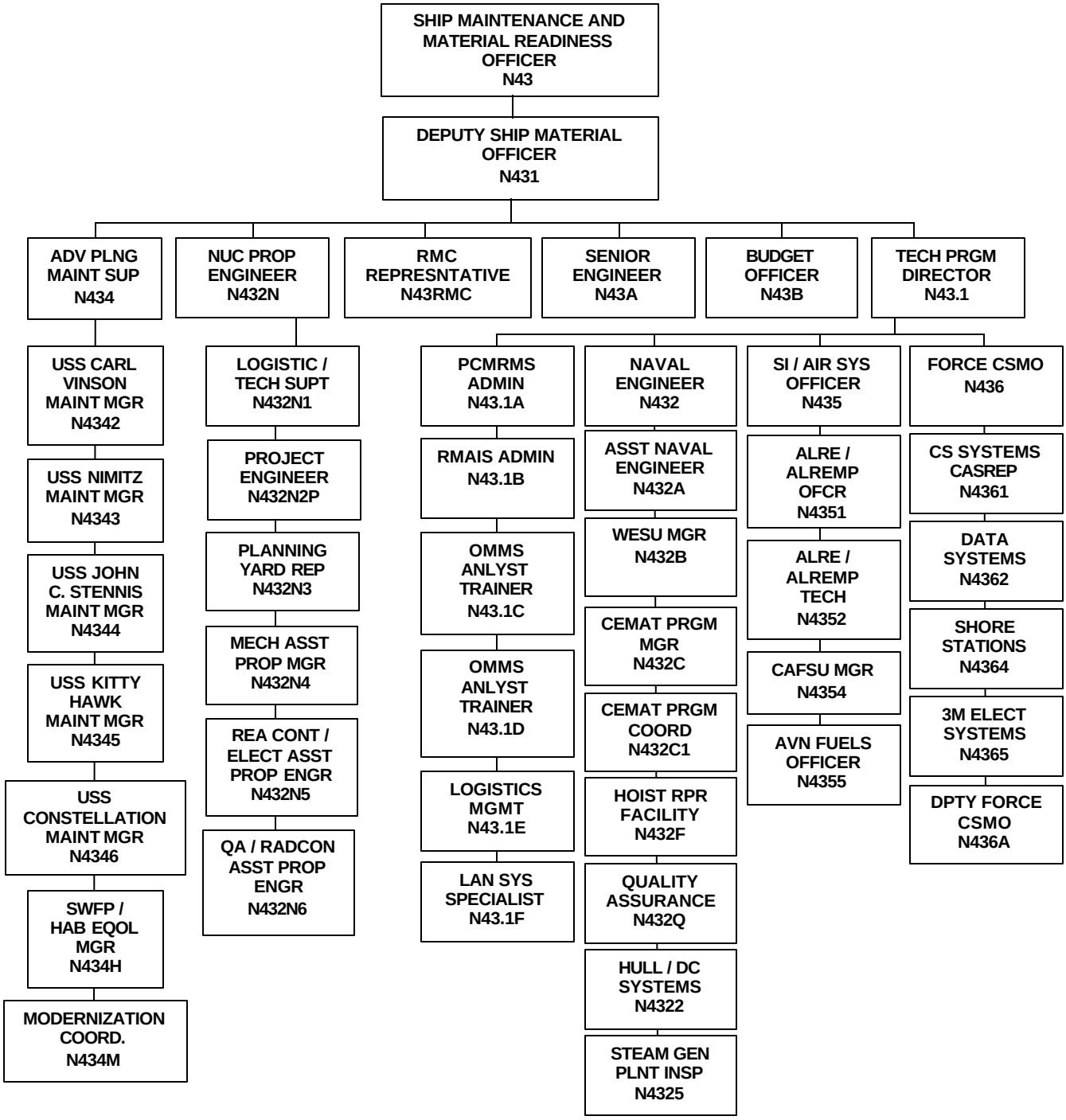

Figure 13-2. COMNAVAIRPAC Ship Material Organization

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Appendix A

Acronyms and Abbreviations

3-M	Maintenance and Material Management
ABE	Aviation Boatswain's Mate (Equipment)
ACHO	Aircraft Handling Officer
ACLS	Automatic Carrier Landing System
AIG	Address Indicator Group
ADPP	Automated Data Processing Program
AEL	Allowance Equipage List
AIMD	Aircraft Intermediate Maintenance Department
ALRE	Aircraft Launch and Recovery Equipment
ALREB	Aircraft Launch and Recovery Equipment Bulletin
ALREMP	Aircraft Launch and Recovery Equipment Maintenance Program
ALREMO	Aircraft Launch and Recovery Equipment Maintenance Officer
APL	Allowance Parts List
ASRL	Automated Shot and Recovery Log Program
ATSS	Aviation Training Support System
AWD	Awaiting Documentation
AWM	Awaiting Maintenance
AWP	Awaiting Parts
AWR	Automated Work Request
AZ	Aviation Maintenance Administrationman
BITE	Built-In Test Equipment

BUPERS.....Bureau of Naval Personnel

CAFSU.....Carrier and Field Service Unit

CANTRAC.....Catalog of Navy Training Courses

CASREP.....Casualty Report

CASCOR.....Casualty Correct

CCF.....Configuration Change Form

CDI.....Collateral Duty Inspector

CDP.....Cross Deck Pendant/Course Data Processing

CDQAI.....Collateral Duty Quality Assurance Inspector

CFA.....Cognizant Field Activity

CINCLANTFLT .....Commander in Chief, U.S. Atlantic Fleet

CINCPACFLT .....Commander in Chief, U.S. Pacific Fleet

CIS.....Commercial Industrial Services

CNET.....Chief of Naval Education and Training

CNO.....Chief of Naval Operations

COH.....Complex Overhaul

COMCARGRU .....Commander, Carrier Group

COMNAVAIRLANT .....Commander, Naval Air Force, U.S. Atlantic Fleet

COMNAVAIRPAC .....Commander, Naval Air Force, U.S. Pacific Fleet

COMNAVAIRSYSCOM .....Commander, Naval Air Systems Command

COMNAVSEASYSCOM .....Commander, Naval Sea Systems Command

COMNAVSUPSYSCOM .....Commander, Naval Supply Systems Command

COSAL.....Coordinated Shipboard Allowance List

CRIPL.....Consolidated Remain-in-Place List

CROV.....Constant Run Out Valve

CSMP.....Current Ship's Maintenance Project

CV.....Aircraft Carrier

CVN.....Aircraft Carrier, Nuclear

DCNO.....Deputy Chief of Naval Operations

DLA.....Defense Logistics Agency

DLSC.....Defense Logistics Service Center

DNEC.....Distribution Navy Enlisted Classification

DOD.....Department of Defense

DODAAC.....Department of Defense Activity Address Code

DON.....Department of the Navy

DOP.....Designated Overhaul Point

DPIA.....Docking Planned Incremental Availability

DRP.....Designated Repair Point

DSN.....Defense Switched Network

DSP.....Depot Support Point

ECP.....Engineering Change Proposal

EDVR.....Enlisted Distribution Verification Report

EER.....Emergency Essential Repair

EHR.....Equipment History Card

EI.....Engineering Investigation

EIC.....Equipment Identification Code

ESWBS.....Extended Ships Work Breakdown Structure

EM.....Electrician's Mate

FAD.....Force/Activity Designator

FASOTRAGRU .....Fleet Aviation Specialized Operational Training Group

FCA.....Field Calibration Activity

FLTCINC.....Fleet Commander in Chief

FMP.....Fleet Modernization Program

FOD.....Foreign Object Damage

FSCM.....Federal Supply Code for Manufacturers

FTC.....Fleet Training Center

HM&E.....Hull, Mechanical and Electrical

HMR.....Hazardous Material Report

IC.....Interior Communications

ICP.....Inventory Control Point

IDPL.....Installed/Discrepant Parts List

ILARTS.....Integrated Launch and Recovery Television Surveillance System

ILS.....Integrated Logistics Support

ILSMT.....Integrated Logistics Support Management Team

IMA.....Intermediate Maintenance Activity

INSURV.....Board of Inspection and Survey

IOL.....Initial Outfitting List

IRAC.....Interim Rapid Action Change

ISRA.....Incremental Selected Restricted Availability

JCN.....Job Control Number

JSN.....Job Sequence Number

LIRSH.....List of Items Requiring Special Handling

LRB/LRC.....Ship Installed and Expeditionary Airfield Aircraft Launch, Recovery and Visual Landing Aid Bulletin/Change

M/C.....Maintenance Control

MAF.....Maintenance Action Form

MDS.....Maintenance Data System

METCAL.....Metrology and Calibration

MI.....Maintenance Instruction

MILSTRAP .....Military Standard Transaction Reporting and Accounting Procedures

MILSTRIP .....Military Standard Requisition and Issue Procedures

MIM.....Maintenance Instruction Manual

MIP.....Maintenance Index Page

ML-N.....Management List, Navy

MR.....Maintenance Requirement

MRC.....Maintenance Requirement Card

MRIL.....Master Repairable Item List

MS-DOS.....Microsoft-Disc Operating System

MS.....Maintenance Support Branch

MTIP.....Maintenance Training Improvement Program

MTRR.....Maintenance Training Requirements Review

NAMSO.....Navy Maintenance Support Office

NAMTRAGRUDET .....Naval Air Maintenance Training Group Detachment

NATTC.....Naval Air Technical Training Center

NAVAIRSYSCOM .....Naval Air Systems Command

NAVAIRTECHSERFAC ....Naval Air Technical Services Facility

NAVAIRWARCENACDIV ...Naval Air Warfare Center Aircraft Division

NAVAVNDEPOT .....Naval Aviation Depot

NAVCALAB .....Navy Calibration Laboratory

NAVICP.....Naval Inventory Control Point

NAVSEALOGCEN .....Naval Sea Logistics Center

NAVSHIPREPFAC .....Naval Ship Repair Facility

NDI.....Non-destructive Inspection

NEC.....Navy Enlisted Classifications

NIIN.....National Identification Item Number

NITRAS.....Navy Integrated Training Resources and Administration System

NOTAL.....Not to All

NSN.....National Stock Number

NAVSHIPYD .....Naval Shipyard

NTP.....Navy Training Plan

OJT.....On-the-Job Training

OMMS.....Organizational Maintenance Management System

OPNAV.....Office of the Chief of Naval Operations

OPTAR.....Operating Target Funds

OSI.....Operating Space Item

PERA (CV) .....Planning and Engineering for Repairs and Alterations of Aircraft Carriers

PIA.....Planned Incremental Availability

PME.....Precision Measuring Equipment

PMS.....Planned Maintenance System

POC.....Point Of Contact

PQDR.....Priority Quality Deficiency Report

PQS.....Personnel Qualification Standards

PSICP.....Program Supply Inventory Control Point

QA.....Quality Assurance

QAI.....Quality Assurance Inspector

QDR.....Quality Deficiency Report

RAC.....Rapid Action Change

RAV.....Restricted Availability

READSUPPGRU .....Readiness Support Group

RFI.....Ready for Issue

SE.....Support Equipment

SECAS.....Ship Equipment Configuration Accounting System

SECNAV.....Secretary of the Navy

SFWP.....Ship's Force Work Package

SHIPALT.....Ship Alteration

SI.....Ship Installation

SIMA.....Shore Intermediate Maintenance Activity

SM&R.....Source, Maintenance, and Recoverability Code

SMD.....Ship's Manning Document

SME.....Subject Matter Expert

SRA.....Selected Restricted Availability

SSC.....Supply Support Center

SUPSHIPS ..... Supervisor of Shipbuilding, Conversion, and Repair

SWLIN..... Ship's Work Line Item Number

TAD ..... Temporary Additional Duty

TAT..... Turn-Around-Time

TAV..... Technical Availability

TCP..... Tool Control Program

TCPL..... Tool Control Plan

TD..... Technical Directive

TMDER..... Technical Manual Deficiency/Evaluation Report

TPDR..... Technical Publication Deficiency Report

TPL..... Technical Publications Library

TYCOM..... Type Commander (COMNAVAIRLANT/PAC, etc.)

UIC..... Unit Identification Code

UMMIPS..... Uniform Material Movement and Issue Procedures

UND..... Urgency of Need Designator

UPS..... Uninterruptible Power Supply

VIDS..... Visual Information Display System

VIDS/MAF ..... Visual Information Display System/Maintenance Action Form (OPNAV 4790/60)

VLA..... Visual Landing Aid

VR..... Voyage Repair

VRT..... Voyage Repair Team

W/C..... Work Center

WESTPAC..... Western Pacific

WDC..... Work Definition Conference

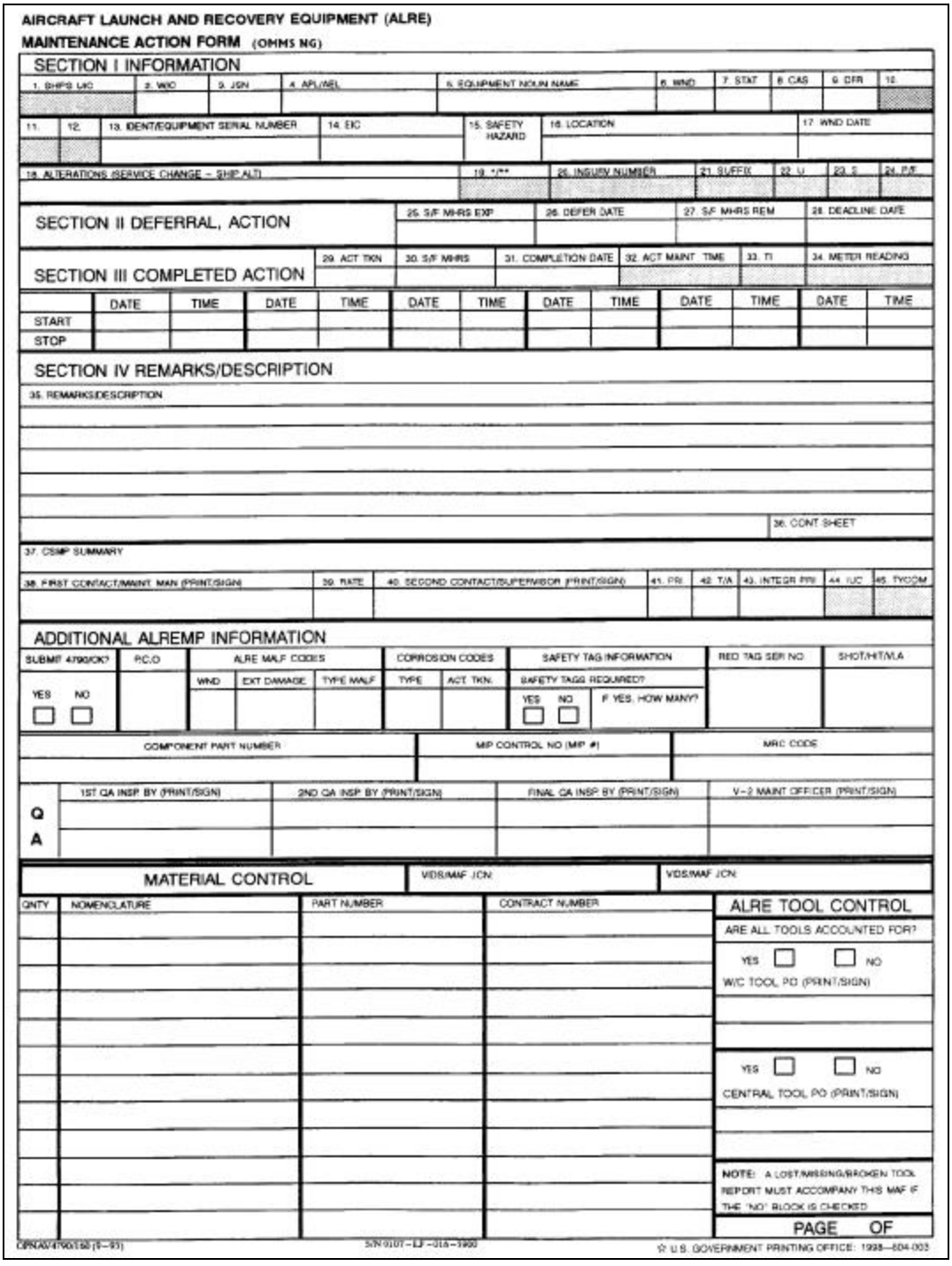
WSF.....Weapon System File

Appendix B

Instructions for completing the ALRE MAF OPNAV Form 4790/160.

GENERAL

THE OPNAV 4790/160 ALRE MAF SERVES AS AN ACTIVE DIVISION EQUIPMENT HISTORICAL MAINTENANCE RECORD. ALL EQUIPMENT INSPECTIONS AND MAINTENANCE ACTIONS (SCHEDULED/UNSCHEDULED AND CORRECTIVE MAINTENANCE) ARE DOCUMENTED ON THE ALRE MAF.



AIRCRAFT LAUNCH AND RECOVERY EQUIPMENT (ALRE)
MAINTENANCE ACTION FORM (OMMS NG)

SECTION I INFORMATION

1. SHPS UIC	2. WUC	3. JSN	4. APL/MEL	5. EQUIPMENT NOUN NAME	6. WND	7. STAT	8. CAS	9. DFR	10.

11.	12.	13. IDENT/EQUIPMENT SERIAL NUMBER	14. EIC	15. SAFETY HAZARD	16. LOCATION	17. WND DATE

18. ALTERATIONS (SERVICE CHANGE – SHIP ALT)	19. */**	20. INQUIRY NUMBER	21. SUFFIX	22. U	23. S	24. P/F

SECTION II DEFERRAL, ACTION

25. S/F MHRS EXP	26. DEFER DATE	27. S/F MHRS REM	28. DEADLINE DATE

SECTION III COMPLETED ACTION

29. ACT TKN	30. S/F MHRS	31. COMPLETION DATE	32. ACT MAINT TIME	33. TI	34. METER READING

	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME
START												
STOP												

SECTION IV REMARKS/DESCRIPTION

35. REMARKS/DESCRIPTION

36. CONT SHEET

37. CSMP SUMMARY

38. FIRST CONTACT/MAINT. MAN (PRINT/SIGN)	39. RATE	40. SECOND CONTACT/SUPERVISOR (PRINT/SIGN)	41. PR	42. T/A	43. INTEGR PR	44. IUC	45. TYCOM

ADDITIONAL ALREMP INFORMATION

SUBMIT 4790/OK?	PCO	ALRE MALF CODES			CORROSION CODES		SAFETY TAG INFORMATION			RED TAG SER NO	SHOT/HIT/MA
YES ☐ NO ☐		WND	EXT DAMAGE	TYPE MALF	TYPE	ACT TKN	SAFETY TAGS REQUIRED? YES ☐ NO ☐		IF YES, HOW MANY?		

COMPONENT PART NUMBER	MIP CONTROL NO (MIP #)	MRC CODE

	1ST QA INSP BY (PRINT/SIGN)	2ND QA INSP BY (PRINT/SIGN)	FINAL QA INSP BY (PRINT/SIGN)	V-2 MAINT OFFICER (PRINT/SIGN)
Q				
A				

MATERIAL CONTROL | VIDS/MAF JCN: | VIDS/MAF JCN:

QNTY	NOMENCLATURE	PART NUMBER	CONTRACT NUMBER

ALRE TOOL CONTROL

ARE ALL TOOLS ACCOUNTED FOR?

YES ☐ NO ☐

W/C TOOL PO (PRINT/SIGN)

YES ☐ NO ☐

CENTRAL TOOL PO (PRINT/SIGN)

NOTE: A LOST/MISSING/BROKEN TOOL REPORT MUST ACCOMPANY THIS MAF IF THE 'NO' BLOCK IS CHECKED

PAGE OF

OPNAV 4790/160 (5-93) S/N 0107-LF-016-3900 ☆ U.S. GOVERNMENT PRINTING OFFICE: 1998—604-003

SECTION I INFORMATION									
1. SHIPS UIC	2. W/C	3. JSN	4. APL/AEL	5. EQUIPMENT NOUN NAME	6. WND	7. STAT	8. CAS	9. DFR	10.

1. SHIPS UIC
IDENTIFIES THE UIC OF THE ACTIVITY ORIGINATING THE MAINTENANCE ACTION. AUTOMATICALLY ENTERED IN OMMS. THIS BLOCK IS NOT REQUIRED TO BE FILLED OUT ON AN ALRE MAF UNLESS A HARD COPY WILL LEAVE THE COMMAND.

2. W/C (WORK CENTER)
ENTER THE 4-CHARACTER WORK CENTER CODE OF THE WORK CENTER INITIATING THE MAINTENANCE ACTION. EXAMPLE: VB01.

3. JSN (JOB SEQUENCE NUMBER)
ENTER THE 4-CHARACTER NUMBER ASSIGNED BY MAINTENANCE CONTROL

4. APL/AEL (ALLOWANCE PARTS LIST/ALLOWANCE EQUIPMENT LIST).
ENTER THE APL/AEL OF THE EQUIP0MENT BEING REPORTED. THE MASTER INDEX OF APLs/AELs LISTS WHAT APLs/AELs ARE AVAILABLE AND CROSS REFERENCES VARIOUS EQUIPMENT IDENTIFICATION NUMBERS TO AN EXISTING APL/AEL.

5. EQUIPMENT NOUN NAME
ENTER THE EQUIPMENT NOMENCLATURE/DESCRIPTION ON WHICH MAINTENANCE IS BEING REPORTED. THE EQUIPMENT NOMENCLATURE/DESCRIPTION SHOULD BE THE SAME AS THAT IDENTIFIED BY THE EIC AND IS LIMITED TO 16 CHARACTERS.

6. WND (WHEN DISCOVERED)
ENTER THE CODE WHICH IDENTIFIES WHEN THE NEED FOR MAINTENANCE WAS DISCOVERED. THE CODES APPLICABLE TO THIS BLOCK ARE:

1. LIGHTING OFF OR STARTING
2. NORMAL OPERATION
3. DURING OPERABILITY TESTS
4. DURING INSPECTION
5. SHIFTING OPERATIONAL MODES
6. DURING PMS
7. SECURING
8. DURING AEC (ASSESSMENT OF EQUIPMENT CONDITION) PROGRAM
0. NOT APPLICABLE (TO BE USED WHEN REPORTING PRINTING SERVICES,ETC)

7. STAT (STATUS)
ENTER THE CODE WHICH MOST ACCURATELY DESCRIBES THE EFFECT OF THE FAILURE OR MALFUNCTION ON THE OPERATIONAL CAPABILITY OF THE EQUIPMENT OR SYSTEM WHEN THE NEED FOR MAINTENANCE WAS FIRST DISCOVERED. CODES APPLICABLE TO THIS BLOCK ARE:

1 = OPERATIONAL
2 = NON-OPERATIONAL
3 = REDUCED CAPABILITY
0 = NOT APPLICABLE (TO BE USED WHEN REPORTING PRINTING SERVICES, ETC)

8. CAS (CAUSE)
ENTER THE CODE BEST DESCRIBING THE CAUSE OF THE FAILURE OR MALFUNCTION WHEN THE NEED FOR MAINTENANCE WAS FIRST DISCOVERED. WHEN MORE THAN ONE CAUSE CONTRIBUTED TO THE FAILURE OR MALFUNCTION, SELECT THE PRIMARY OR OVERRIDING CAUSE. THIS BLOCK PROVIDES ESPECIALLY VALUABLE INFORMATION TO THE EQUIPMENT MANAGER. WITOUT IT, ONLY THE FACT THAT NOT EXPECTED TO BE A TRAINED ENGINEER AND KNOW ABSOLUTELY THE CAUSE OF FAILURE, THIER BEST JUDGEMENT IS DESIRED. CODES FOR THIS BLOCK ARE:

1	ABNORMAL ENVIRONMENT	EXPOSURE TO CONDITIONS MORE EXTREME THAN THOSE REASONABLY EXPECTED IN THE NORMAL SHIPBOARD ENVIRONMENT.
2	MANUFACTURER	MATERIAL NOT MANUFACTURED OR ASSEMBLED ACCORDING TO SPECIFICATIONS. (NOTE:IN THESE INSTALLATION DEFECTS CASES, AN ALRE QDR/HMR/EI SHOULD BE SUBMITTED IAW OPNAVINST 4790.15.)
3	LACK OF KNOWLEDGE OR	- FAILURE OR MALFUNCTION OF THE EQUIPMENT DUE TO INSUFFICIENT TRAINING, EXPERIENCE, OR SKILL PHYSICAL COORDINATION OF THE OPERATOR, MAINTAINER, OR OTHER PERSONNEL.
4	COMMUNICATION PROBLEM	A BREAKDOWN IN THE PASSING, RECEIVING, OR UNDERSTANDING OF INFORMATION
5	INADEQUATE INSTRUCTION/ PROCEDURE	THE INSTRUCTION OR PROCEDURAL GUIDE HAS OMISSIONS, ERRORS, AMBIGUITIES, OR OTHER DEFICIENCIES. (NOTE: IN THESE CASES AN ALRE TPDR SHOULD BE SUBMITTED IAW OPNAVINST 4790.15)
6	INADEQUATE DESIGN	MATERIAL WHICH WAS MANUFACTURED AND INSTALLED IN ACCORDANCE WITH SPECIFICATIONS FAILED PREMATURELY DURING NORMAL USAGE UNDER NORMAL ENVIRONMENTAL CONDITIONS. (NOTE:IN THESE CASES, AN ALRE DISCREPANCY REPORT (ALRE QDR/HMR/EI) SHOULD BE SUBMITTED IAW OPNAVINST 4790.15.)
7	NORMAL WEAR AND TEAR	MATERIAL REQUIRES REPLACEMENT AFTER LONG SERVICE AND/OR AS A RESULT OF PMS.
0	OTHER OR NO MALFUNCTION	EXPLAIN IN REMARKS.

NOTE: EXAMPLES OF THE ABOVE CODES MAY BE FOUND IN OPNAVINST 4790.4.

9. DFR (DEFERRAL REASON).
ENTER THE DEFERRAL REASON CODE WHICH BEST DESCRIBES THE REASON MAINTENANCE CANNOT BE DONE AT THE TIME OF DEFERRAL. THIS BLOCK MUST ALWAYS BE FILLED IN WHEN DOCUMENTING A DEFERRED MAINTENANCE ACTION. THE CODES FOR THIS BLOCK ARE:

CODE	DEFERRAL REASON	WORK FOR WHICH CODE IS USED
1	DUE TO SHIP'S FORCE WORK BACKLOG/OPERATIONAL PRIORITY	- WITHIN CAPABILITY OF SHIP TO ACCOMPLISH BUT UNABLE TO DO SO BECAUSE OF SHIP'S OVERALL WORKLOAD OR OPERATIONAL.
2	LACK OF MATERIAL	CONDITIONS WITHIN CAPABILITY OF SHIP'S FORCE BUT UNABLE TO ACCOMPLISH DUE TO LACK OF PARTS, OR LACK OF TOOLS, TEST EQUIPMENT, ETC., SPECIFIED FOR REPAIR BY THE EQUIPMENT TECHNICAL MANUAL OR DRAWING.
3	NO FORMAL TRAINING ON	SHOULD BE WITHIN CAPABILITY OF SHIP'S FORCE BUT PERSONNEL RESPONSIBLE HAVE THIS EQUIPMENT NOT RECEIVED FORMAL TRAINING IN THE MAINTENANCE OF THE EQUIPMENT.
4	FORMAL TRAINING INADEQUATE	SHOULD BE WITHIN CAPABILITY OF SHIP'S FORCE, AND PERSONNEL RESPONSIBLE HAVE FOR THIS EQUIPMENT RECEIVED FORMAL TRAINING, BUT THE TRAINING IS CONSIDERED INADEQUATE.
5	INADEQUATE SCHOOL	SHOULD BE WITHIN CAPABILITY OF SHIP'S FORCE, AND PERSONNEL RESPONSIBLE HAVE PRACTICAL TRAINING RECEIVED FORMAL TRAINING, BUT PRACTICAL MAINTENANCE ASPECTS OF TRAINING ARE CONSIDERED INADEQUATE.
6	LACK OF FACILITIES	THE SHIP IS NOT ALLOWED SHOP EQUIPMENT OR OTHER FACILITIES TO ACCOMPLISH;CAPABILITIES WORK IS OTHERWISE BEYOND EXPECTED CAPABILITY OF SHIP'S FORCE ACCOMPLISH.
7	NOT AUTHORIZED FOR SHIPS	DIRECTIVES OF HIGHER AUTHORITY SPECIFY THAT THE JOB WILL BE DONE BY OTHER THAN SHIP'S FORCE.
8	FOR SHIP'S FORCE OVERHAUL	FOR JOBS TO BE DONE BY SHIP'S FORCE DURING FORTHCOMING OVERHAUL OR AVAILABILITY.
9	LACK OF TECHNICAL DOCUMENTATION	SHOULD BE WITHIN CAPABILITY OF SHIP TO ACCOMPLISH, BUT UNABLE TO DO SO BECAUSE TECHNICAL MANUALS, BLUEPRINTS, DRAWINGS, ETC., NOT AVAILABLE
0	OTHER - OR – NOT APPLICABLE	- IF "OTHER", DESCRIBE IN BLOCK 35-REMARKS

10. THIS BLOCK IS RESERVED FOR TYCOM DIRECTED APPLICATIONS

11.	12.	13. IDENT/EQUIPMENT SERIAL NUMBER	14. EIC	15. SAFETY HAZARD	16. LOCATION	17. WND DATE

18. ALTERATIONS (SERVICE CHANGE – SHIP ALT)	19. */**	20. INSURV NUMBER	21. SUFFIX	22. U	23. S	24. P/F

BLOCKS 11 and 12: THESE BLOCKS ARE RESERVED FOR TYCOM DIRECTED APPLICATIONS.

13. IDENT/EQUIPMENT SERIAL NUMBER.

ENTER THE IDENTIFICATION OR SERIAL NUMBER OF THE EQUIPMENT OR SYSTEM ON WHICH MAINTENANCE IS BEING PERFORMED OR DEFERRED. IF THERE IS NOT AN IDENTIFICATION OR SERIAL NUMBER, ENTER "N/A".

14. EIC (EQUIPMENT IDENTIFICATION CODE).

ENTER THE EQUIPMENT IDENTIFICATION CODE OF THE SYSTEM, SUBSYSTEM OR EQUIPMENT FOR WHICH THE MAINTENANCE IS BEING REPORTED.

NOTE: BE AS SPECIFIC AS POSSIBLE. DO NOT ENTER A SYSTEM OR GENERAL ARRANGEMENT DRAWING EIC FOR AN EQUIPMENT THAT HAS ITS OWN SPECIFIC EIC.

15. SAFETY HAZARD.

ENTER THE APPLICABLE SAFETY CODE WHEN, IN THE MAINTENANCE PERSON'S OPINION, THE DOCUMENTED MAINTENANCE ACTION DESCRIBES A PROBLEM OR CONDITION WHICH HAS CAUSED, OR HAS THE POTENTIAL TO CAUSE, INJURY TO PERSONNEL AND/OR DAMAGE TO MATERIAL. IF THE DOCUMENTED MAINTENANCE ACTION IS NOT SAFETY RELATED, ENTER "0".

1. CRITICAL SAFETY OR HEALTH DEFICIENCY - CORRECT IMMEDIATELY.
2. SERIOUS SAFETY OR HEALTH DEFICIENCY - SUSPENSION OF EQUIPMENT/SYSTEM/SPACE USE IS REQUIRED.
3. MODERATE SAFETY OR HEALTH DEFICIENCY - WAIVER OF EQUIPMENT/SYSTEM/SPACE USE IS GRANTED PENDING CORRECTION OF THE ITEM.
4. MINOR SAFETY OR HEALTH DEFICIENCY.
5. NEGLIGIBLE SAFETY OR HEALTH DEFICIENCY.
0. MAINTENANCE ACTION IS NOT SAFETY RELATED.

NOTE: SEE OPNAVINST 4790.4 FOR ADDITIONAL EXPLANATION.

16. LOCATION.

ENTER THE LOCATION OF THE COMPONENT IDENTIFIED IN BLOCK 13 BY USING ONE OF THE METHODS LISTED BELOW:

1. COMPARTMENT: ENTER THE COMPARTMENT NUMBER IDENTIFIED ON THE COMPARTMENT CHECK-OFF LIST.
2. DECK-FRAME-SIDE: ENTER THE DECK, FRAME AND SIDE NOTATION THAT BEST DESCRIBES THE LOCATION OF THE COMPONENT.
3. IF NEITHER COMPARTMENT NOR THE DECK-FRAME-SIDE NOTATION IS APPROPRIATE, ENTER THE NAME OF THE LOCATION (E.G., FANTAIL, FLIGHT DECK, ETC.).

NOTE: FORMAL DEFINITIONS OF SHIPBOARD LOCATIONS CAN BE FOUND IN THE GENERAL SPECIFICATION FOR SHIPS OF THE U.S. NAVY (NAVSEA PUB-AA-SPN-010/GEN-SPEC) (NOTAL).

17. WND DATE (WHEN DISCOVERED DATE).

ENTER THE JULIAN DATE WHEN THE EQUIPMENT OR SYSTEM FAILURE OR MALFUNCTION WAS DISCOVERED. A JULIAN DATE IS A FOUR CHARACTER ENTRY AND IS COMPOSED OF THE LAST DIGIT OF THE CALENDAR YEAR FOLLOWED BY THE NUMERICAL DAY OF THE YEAR; I.E., 10 JANUARY 1992 IS "2010".

NOTE: USE THE ACTUAL DATE THE DISCREPANCY/MALFUNCTION WAS DISCOVERED. IF THE OMMS COMPUTER IS DOWN WHEN DISCREPANCY IS ACTUALLY DISCOVERED, THE OPERATOR MAY HAVE TO MANUALLY CHANGE THIS DATE TO REFLECT THE ACTUAL "WHEN DISCOVERED DATE".

18. ALTERATIONS (SERVICE CHANGE - SHIPALT).

FOR A SERVICE CHANGE: ENTER THE SERVICE CHANGE NUMBER.
FOR A SHIP ALT: ENTER THE ALTERATION IDENTIFICATION EXACTLY AS IT APPEARS ON THE SHIPALT RECORD.

NOTE: OPNAVINST 4790.4 CONTAINS ADDITIONAL INFORMATION.

BLOCKS 19 THROUGH 24: FOR INSURV USE - NO ENTRIES REQUIRED.

SECTION II DEFERRAL, ACTION	25. S/F MHRS EXP	26. DEFER DATE	27. S/F MHRS REM	28. DEADLINE DATE

25. S/F MHRS EXP (SHIP'S FORCE MANHOURS EXPENDED).

ENTER THE TOTAL MANHOURS (TO THE NEAREST WHOLE HOUR) EXPENDED BY PERSONNEL OF ALL WORK CENTERS INVOLVED IN THE MAINTENANCE ACTION UP TO THE TIME OF DEFERRAL (INCLUDE DOCUMENTATION TIME WHICH SHOULD NOT EXCEED 1 HOUR). IF TWO MEN SPEND 1.3 HOURS EACH IN DISASSEMBLING A COMPONENT, AND THEN DECIDE THAT OUTSIDE ASSISTANCE IS REQUIRED, THE ENTRY WOULD BE "0003" (2 TIMES 1.3 - 2.6, ROUNDED OFF TO 3.0 HOURS).

NOTE: WHEN ENTERING DATE INTO OMMS TO OBTAIN A JSN, THIS BLOCK MUST CONTAIN A MINIMUM VALUE OF "1".

26. DEFER DATE (DEFERRAL DATE).

ENTER THE JULIAN DATE WHEN THE MAINTENANCE ACTION WAS DEFERRED.

27. S/F MHRS REM (SHIP'S FORCE MANHOURS REMAINING).

ENTER THE ESTIMATED NUMBER OF SHIP'S FORCE MANHOURS REMAINING TO COMPLETE THE MAINTENANCE ACTION. ROUND OFF TO THE NEAREST WHOLE HOUR.

28. DEADLINE DATE.

THIS IS AN OPTIONAL ENTRY. THE ORIGINATOR OF THE DEFERRED ACTION MAY ENTER THE LATEST POSSIBLE JULIAN DATE THAT OUTSIDE ASSISTANCE AND SHIP'S FORCE WORK MUST BE COMPLETED. THIS ENTRY MAY BE USED TO INDICATE A COMPLETION DATE REQUIRED TO MEET AN OPERATIONAL COMMITMENT, OR TO ALLOW ANOTHER JOB TO START.

SECTION III COMPLETED ACTION	29. ACT TKN	30. S/F MHRS	31. COMPLETION DATE	32. ACT MAINT TIME	33. TI	34. METER READING

	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME
START												
STOP												

29. ACTION TKN (ACTION TAKEN).

ENTER THE CODE WHICH BEST DESCRIBES THE ACTION TAKEN TO COMPLETE THE MAINTENANCE.

1. MAINTENANCE COMPLETED; PARTS DRAWN FROM SUPPLY.
2. MAINTENANCE COMPLETED; REQUIRED PARTS NOT DRAWN FROM SUPPLY (LOCAL MANUFACTURE, PRE-EXPENDED BINS, ETC.).
3. MAINTENANCE COMPLETED, NO PARTS REQUIRED.
4. CANCELLED.
0. NOT APPLICABLE; DESCRIBE IN BLOCK 35 - REMARKS.

30. S/F MHRS (SHIP'S FORCE MANHOURS EXPENDED).

FOR A MAINTENANCE ACTION: ENTER THE TOTAL MANHOURS (TO THE NEAREST WHOLE HOUR) THAT SHIP'S FORCE EXPENDED DOING THE MAINTENANCE. **TOTAL MAINTENANCE TIME, INCLUDING MAINTENANCE SUPPORT MANHOURS, MUST BE DOCUMENTED IN THIS BLOCK.**

FOR A CONFIGURATION CHANGE (CK): ENTER THE TOTAL NUMBER OF MANHOURS (TO THE NEAREST WHOLE HOUR) USED BY SHIP'S FORCE TO COMPLETE AND DOCUMENT THE MAINTENANCE ACTION (DOCUMENTATION TIME SHOULD NOT EXCEED 1 HOUR).

31. COMPLETION DATE.

ENTER THE JULIAN DATE THE MAINTENANCE WAS COMPLETED.

32. ACT MAINT TIME (ACTIVE MAINTENANCE TIME).

THIS BLOCK IS NOT NORMALLY USED BY V-2 DIVISION PERSONNEL (SEE OPNAVINST 4790.4 (NOTAL) FOR ADDITIONAL INFORMATION.)

33. TI (TROUBLE ISOLATION).

THIS BLOCK IS NOT NORMALLY USED BY V-2 DIVISION PERSONNEL. (SEE OPNAVINST 4790.4 (NOTAL) FOR ADDITIONAL INFORMATION.)

34. METER READING.

THIS BLOCK IS NOT NORMALLY USED BY V-2 DIVISION PERSONNEL. (SEE OPNAVINST 4790.4 (NOTAL) FOR ADDITIONAL INFORMATION.)

NOTE: ENTER HIT/SHOT/VLA INFORMATION IN THE SPACE PROVIDED IN THE "ADDITIONAL ALREMP INFORMATION" SECTION.

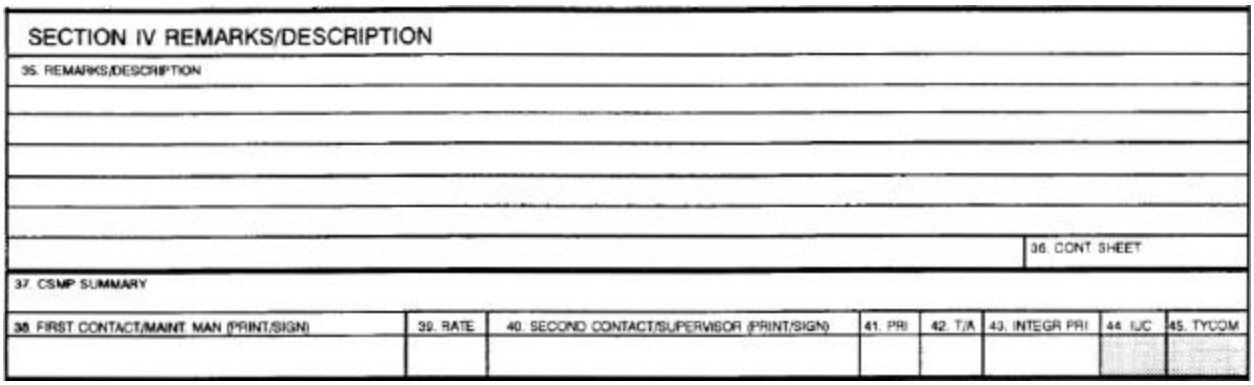
START/STOP TIMES.

ENTER JULIAN DATE AND START/STOP TIMES EACH TIME THE JOB GOES "IN WORK", AWM, OR AWP, AS APPROPRIATE.

NOTE: THE JULIAN DATE AND START/STOP TIMES ARE NOT ENTERED INTO OMMS. THIS INFORMATION WILL BE ANNOTATED ON THE HARD COPY ALRE MAF TO ASSIST IN TRACKING JOB PROGRESS. MANHOURS WILL BE TRACKED SEPARATELY BY THE WORK CENTER SUPERVISOR. TOTAL MANHOURS (TO THE NEAREST WHOLE HOUR)WILL BE ANNOTATED IN BLOCK 30.

NOTE

WHEN COMPLETING AN ALRE MAF TO DOCUMENT WORK
ACCOMPLISHED BY AN OUTSIDE ACTIVITY, REFER TO PARAGRAPH 9.11.6 FOR ADDITIONAL INSTRUCTIONS.



SECTION IV REMARKS/DESCRIPTION							
35. REMARKS/DESCRIPTION							
					36. CONT SHEET		
37. CSMP SUMMARY							
38. FIRST CONTACT/MAINT MAN (PRINT/SIGN)	39. RATE	40. SECOND CONTACT/SUPERVISOR (PRINT/SIGN)	41. PRI	42. T/A	43. INTEGR PRI	44. IUC	45. TYCOM

35. REMARKS/DESCRIPTION.
ENTER REMARKS RELATING TO THE MAINTENANCE ACTION. THESE REMARKS SHOULD BE BRIEF BUT COMPLETE AND MEANINGFUL. IF A SAFETY HAZARD CODE (OTHER THAN "0") IS ENTERED IN BLOCK 15, A DESCRIPTION OF THE CONDITION CREATING THE HAZARD SHOULD BE INSERTED HERE. IF MORE SPACE IS NEEDED, CHECK BLOCK 36 AND ENTER THE JCN OF THE FIRST FORM ON A SECOND ALRE MAF AND CONTINUE THE REMARKS. FILL OUT THE PAGE _ OF _ (IN THE BOTTOM RIGHT CORNER) AS APPROPRIATE. THE REMARKS ENTERED IN BLOCK 35 REMARKS/DESCRIPTION ARE USED TO PROVIDE MAINTENANCE HISTORY.
NOTE: PRECISE AND CONCISE STATEMENTS SHOULD BE USED IN BLOCK 35 REMARKS/DESCRIPTION. THEY SHOULD INCLUDE SUFFICIENT INFORMATION TO CLEARLY IDENTIFY THE PROBLEM AND ITS RESOLUTION.

36. CONT. SHEET (CONTINUATION SHEET).
ENTER AN "X" WHEN IT IS NECESSARY TO CONTINUE THE REMARKS ON A SECOND ALRE MAF.

37. CSMP SUMMARY.

ENTER A CONDENSED DESCRIPTION OF THE PROBLEM. THIS ENTRY IS USED IN THE CSMP SUMMARY REPORT NO. 1 FOR ALRE PMS. THE ENTRY SHOULD READ: "PMS IAW PERIODICITY CODE", I.E., PMS IAW M-1.

38. FIRST CONTACT/MAINT. (MAINTENANCE) MAN (PRINT/SIGN).
PRINT THE NAME OF THE SENIOR PERSON ACTIVELY ENGAGED IN THE MAINTENANCE ACTION. THIS INDIVIDUAL'S SIGNATURE SHALL ALSO BE ENTERED IN THIS BLOCK PRIOR TO FORWARDING THE COMPLETED ALRE MAF TO MAINTENANCE CONTROL.

39. RATE. ENTER THE RATE OF the FIRST CONTACT/MAINTENANCE MAN.

40. SECOND CONTACT/SUPERVISOR (PRINT/SIGN).
PRINT THE NAME OF SUPERVISOR OF THE FIRST CONTACT/MAINTENANCE MAN. THE SUPERVISOR'S SIGNATURE SHALL ALSO BE ENTERED IN THIS BLOCK AFTER HE/SHE SCREENS THE ALRE MAF FOR COMPLETENESS AND ACCURACY, AND PRIOR TO FORWARDING IT TO MAINTENANCE CONTROL.

NOTE: IF THE NAME AND SIGNATURE APPEARING IN BLOCK 40 OF THE ALRE MAF ARE DIFFERENT THAN THAT AUTOMATICALLY APPEARING ON THE OMMS SCREEN, THE OMMS OPERATOR SHALL REVISE/CORRECT THE OMMS ENTRY TO MATCH THAT NAME APPEARING ON THE ALRE MAF.

41. PRI (PRIORITY).
ENTER THE APPROPRIATE PRIORITY CODE LISTED BELOW, APPLICABLE TO MAINTENANCE ACTIONS BEING DEFERRED.

1. MANDATORY	CRITICAL SAFETY OR DAMAGE CONTROL ITEM. REQUIRED FOR PERFORMANCE OF SHIP'S MISSION. REQUIRED TO SUSTAIN BARE MINIMUM ACCEPTABLE LEVEL OF HUMAN NEEDS AND SANITATION. C-4 CASREP (CASUALTY REPORT) ON EQUIPMENT.
2. ESSENTIAL	EXTREMELY IMPORTANT SAFETY OR DAMAGE CONTROL ITEM. REQUIRED FOR SUSTAINED PERFORMANCE OF SHIP'S MISSION. REQUIRED TO SUSTAIN NORMAL LEVEL OF BASIC HUMAN NEEDS AND SANITATION. REQUIRED TO MAINTAIN OVERALL INTEGRITY OF SHIP OR A SYSTEM ESSENTIAL TO SHIP'S MISSION. REQUIRED FOR MINIMUM ACCEPTABLE LEVEL OF PRESERVATION AND PROTECTION. C-3 CASREP ON EQUIPMENT.
3. HIGHLY DESIRABLE	IMPORTANT SAFETY OR DAMAGE CONTROL ITEM. REQUIRED FOR EFFICIENT PERFORMANCE OF SHIP'S MISSION. REQUIRED FOR NORMAL LEVEL OF HUMAN COMFORT. REQUIRED FOR OVERALL INTEGRITY OF EQUIPMENT OR SYSTEMS THAT ARE NOT ESSENTIAL, BUT ARE REQUIRED AS BACKUPS IN CASE OF PRIMARY SYSTEM FAILURE. REQUIRED TO ACHIEVE MINIMUM ACCEPTABLE LEVEL OF APPEARANCE. C-2 CASREP ON EQUIPMENT.
4. DESIRABLE	SOME CONTRIBUTION TO EFFICIENT PERFORMANCE. SOME CONTRIBUTION OF NORMAL LEVEL OF HUMAN COMFORT AND WELFARE. REQUIRED FOR OVERALL INTEGRITY OF OTHER THAN AN ESSENTIAL SYSTEM OR ITS BACKUP SYSTEM. WILL CONTRIBUTE TO APPEARANCE IN AN IMPORTANT AREA. WILL SIGNIFICANTLY REDUCE FUTURE SHIP MAINTENANCE.

42. T/A (TYPE AVAILABILITY CODE.
ENTER THE CODE FOR THE TYPE AVAILABILITY RECOMMENDED FOR PERFORMANCE OF A DEFERRAL. TYPE AVAILABILITY CODES ARE AS FOLLOWS:

1 = DEPOT (SHIPYARD OR SHIP REPAIR FACILITY).
2 = INTERMEDIATE MAINTENANCE ACTIVITY (IMA) (TENDER/REPAIR SHIP, SIMA, ETC.)
3 = TYCOM SUPPORT UNIT (FLOATING DRY DOCK OR TECHNICAL ASSISTANCE FROM NSCSES/NAVSEACEN/CONTRACTOR REPRESENTATIVE).
4 = SHIP'S FORCE.
0 = NOT APPLICABLE.

NOTE: THERE MUST BE A CORRELATION BETWEEN THE DEFERRAL REASON CODE, BLOCK 9, AND THIS BLOCK**.**

43. INTEGR PRI (INTEGRATED PRIORITY).
IF THE MAINTENANCE IS TO BE DONE BY AN OUTSIDE ACTIVITY, A SEQUENTIAL NUMBER MAY BE PLACED IN THIS BLOCK TO INDICATE ITS PRIORITY RELATIVE TO OTHER DEFERRED WORK FOR A GIVEN AVAILABILITY.

44. IUC (SCREENING).
THIS BLOCK IS NOT NORMALLY USED BY V-2 DIVISION PERSONNEL. (SEE OPNAVINST 4790.4 (NOTAL) FOR ADDITIONAL INFORMATION.)

45. TYCOM (SCREENING).THIS BLOCK IS NOT NORMALLY USED BY V-2 DIVISION PERSONNEL. (SEE OPNAVINST 4790.4 (NOTAL) FOR ADDITIONAL INFORMATION.

ADDITIONAL ALREMP INFORMATION									
SUBMIT 4790/CK?	P/C/O	ALRE MALF CODES			CORROSION CODES		SAFETY TAG INFORMATION		RED TAG SER NO.	SHOT/HIT/VLA
		WND	EXT DAMAGE	TYPE MALF	TYPE	ACT. TKN.	SAFETY TAGS REQUIRED?			
YES ☐ NO ☐							YES ☐ NO ☐	IF YES, HOW MANY?		

SUBMIT 4790/CK?
MANDATORY FOR HARDCOPY. CHECK THE YES OR NO BLOCK TO INDICATE WHETHER OR NOT AN OPNAV 4790/CK NEEDS TO BE SUBMITTED; I.E., YES WOULD BE CHECKED WHEN REPORTING ACCOMPLISHMENT OF A SERVICE CHANGE, SHIP ALTERATION OR CONFIGURATION CHANGE.
NOTE: IF THIS BLOCK IS CHECKED "YES" ON THE ALRE MAF, THE REQUIRED 4790/CK SHOULD BE ATTACHED TO THE ALRE MAF.

P/C/O BLOCK.
MANDATORY FOR HARDCOPY AND OMMS. ENTER THE CORRECT CODE:
P: PREVENTATIVE - THAT MAINTENANCE ACCOMPLISHED USING AN MRC CARD, OTHER THAN AC@ CARDS, AS GUIDANCE TO PERFORM THE MAINTENANCE. EXAMPLES: PRE-OP INSPECTIONS, POST-OP INSPECTIONS, WEEKLY, MONTHLY, QUARTERLY, SEMI-ANNUAL, SITUATIONAL REQUIREMENTS, LAY-UP MAINTENANCE (AS LISTED ON MIP PAGES), MIP SCHEDULING AIDS. ANY MAINTENANCE ACCOMPLISHED USING TECHNICAL MANUALS THAT IS DIRECTED BY THE MIP PAGE, SHALL BE CONSTRUED AS PREVENTATIVE MAINTENANCE.
C: CORRECTIVE - THAT MAINTENANCE ACCOMPLISHED USING THE TECHNICAL MANUAL OR AC@ CARDS AS GUIDANCE TO PERFORM THE MAINTENANCE. EXAMPLES: REPACK OF ANCHOR DAMPERS IAW NAVAIR 51-5BCA-1.1.
O: OTHER - THOSE ACTIONS OTHER THAN PREVENTATIVE OR CORRECTIVE. EXAMPLES: INSTALLING A SERVICE CHANGE, COMPLYING WITH A SERVICE BULLETIN, COMPLETING A REPAIR PROCEDURE, COMPLETING AN ALTERATION, COMPLYING WITH A NAVAL MESSAGE, OR ANY PRESERVATION WORK ON ALRE EQUIPMENT.

ALRE MALF CODE - WHEN DISCOVERED.
MANDATORY FOR HARDCOPY AND OMMS. ENTER THE APPROPRIATE CODE BELOW TO INDICATE WHEN THE EQUIPMENT MALFUNCTIONED.
0 - NO DEFECT - PLANNED MAINTENANCE (PMS).
1 - NO DEFECT - PRECAUTIONARY MAINTENANCE.
2 - DISCOVERED DURING OPERATIONS.
3 - DISCOVERED DURING PRE/POST OPERATIONAL INSPECTION.
4 - DISCOVERED DURING PLANNED MAINTENANCE.
5 - DISCOVERED DURING NON-PMS INSPECTION.
6 - REMOVAL/REPLACEMENT DIRECTED BY HIGHER AUTHORITY.
7 - EQUIPMENT DAMAGED BY MALFUNCTION OF ASSOCIATED EQUIPMENT.

ALRE MALF CODE - EXTENT DAMAGE.
MANDATORY FOR HARDCOPY AND OMMS. ENTER THE MOST APPROPRIATE CODE BELOW TO INDICATE THE EXTENT OF DAMAGE SUFFERED BY THE MALFUNCTIONING EQUIPMENT.
0 - NO FAILURE.
1 - CATASTROPHIC FAILURE (FAILURE DAMAGED OTHER EQUIPMENT).
2 - SERIOUS FAILURE (UNIT MISSION DEGRADED UNTIL REPAIRED, I.E., C-2 CASREP.
3 - MAJOR FAILURE (EQUIPMENT DOWN UNTIL OUTSIDE ASSISTANCE REPAIRS).
4 - MINOR FAILURE (EQUIPMENT DOWN UNTIL REPAIR BY SHIP'S FORCE PERSONNEL.
5 - DEGRADED CONDITION (EQUIPMENT OPERABLE WITH LIMITATIONS).

ALRE MALF CODE - TYPE MALF.
MANDATORY FOR HARDCOPY AND OMMS. ENTER THE MOST APPROPRIATE CODE BELOW TO INDICATE THE TYPE OF EQUIPMENT MALFUNCTION.
0 - NO DEFECT.
1 - CORROSION
2 - BURNED/OVERHEATED.
3 - BROKEN, BENT, DEFORMED.
4 - OUT OF ADJUSTMENT.
5 - JAMMED, BINDING.
6 - FAILED NDI.
7 - ABNORMAL OPERATION.
8 - FALLS OUTSIDE NORMAL ACCEPTABLE PARAMETERS.
9 - ABNORMAL WEAR.
A - SCORED, GOUGED.
B - ABNORMAL A/G RAM TRAVEL
C - ABNORMAL CATAPULT ENDSPEED.
D - ELECTRICAL/ELECTRONIC COMPONENT FAILURE.
E - LEAKING.

CORROSION CODE - TYPE.
MANDATORY FOR HARDCOPY AND OMMS. ENTER THE MOST APPROPRIATE CODE BELOW TO INDICATE THE TYPE OF CORROSION PRESENT. SEE APPENDIX C FOR AMPLIFYING INFORMATION.
0 - NO CORROSION.
1 - UNIFORM ATTACK.
2 - PITTING CORROSION.
3 - CREVICE CORROSION.
4 - EXFOLIATION (FLAKING).

CORROSION CODE - ACT. TKN. (ACTION TAKEN).
MANDATORY FOR HARDCOPY AND OMMS. ENTER THE MOST APPROPRIATE CODE BELOW TO INDICATE THE CORROSION CONTROL ACTION TAKEN. SEE APPENDIX C FOR AMPLIFYING INFORMATION.
0 - NO ACTION REQUIRED.
1 - REMOVE CORROSION; APPLY OIL, GREASE, PRESERVATIVE.
2 - REMOVE CORROSION; APPLY TEMPORARY COATING.
3 - REMOVE CORROSION; APPLY APPROVED COATING.
4 - REMOVE PART FOR IMA/DEPOT CORROSION CONTROL.
5 - NO CORROSION CONTROL ACTION TAKEN, DEFERRAL SUBMITTED.

SAFETY TAGS REQUIRED?
MANDATORY ENTRY FOR HARDCOPY. OPTIONAL ENTRY IN OMMS. ENTER "X" IN THE APPROPRIATE BLOCK TO INDICATE WHETHER OR NOT THE MAINTENANCE BEING PERFORMED REQUIRES A SAFETY TAG.

IF YES, HOW MANY? - **MANDATORY ENTRY FOR HARDCOPY. OPTIONAL ENTRY IN OMMS.** ENTER THE TOTAL NUMBER OF SAFETY TAGS REQUIRED (UP TO A TOTAL OF 99).

RED TAG SER. NO.
MANDATORY ENTRY FOR HARDCOPY. OPTIONAL ENTRY IN OMMS. ENTER THE FIRST RED TAG SERIAL NUMBER OF THE TAG SEQUENCE FOR THIS PARTICULAR MAINTENANCE TASK. IF MORE THAN ONE SEQUENCE OF TAGS ARE REQUIRED, AND THEY ARE NOT IN SEQUENTIAL ORDER, ANNOTATE THE FIRST SEQUENCE IN THIS BLOCK, AND ALL OTHER SEQUENCES IN THE BLOCK 35 NARRATIVE. THE TOTAL NUMBER OF RED TAGS IN ALL SEQUENCES MUST BE ANNOTATED IN THE "HOW MANY" BLOCK.

SHOT/HIT/VLA
MANDATORY FOR HARDCOPY AND OMMS. ENTER THE APPROPRIATE NUMBER AS DESCRIBED BELOW:
- FOR **CATAPULT ARRESTING GEAR FRESNEL LENS** AND ASSOCIATED SUBSYSTEM COMPONENTS, ENTER THE NUMBER OF CATAPULT LAUNCHES, ARRESTED LANDINGS, OR THE FLOLS METER READING AS APPROPRIATE.

- FOR **JET BLAST DEFLECTORS** (JBD), ENTER THE TOTAL LAUNCHES FOR THE RESPECTIVE CATAPULT.

- FOR **HOLDBACKS**, ENTER THE TOTAL CATAPULT LAUNCHES RECORDED FOR THAT INDIVIDUAL HOLDBACK.

- FOR **VLA EQUIPMENT**, IF THERE IS A SPECIFIC METER READING, ENTER THAT METER READING.

- FOR **HEADS-UP DISPLAY** (HUD), ENTER THE METER READING FROM AUXILIARY ELECTRONICS BOX UNIT TWO.

- FOR **OTHER EQUIPMENT** WITHOUT A SPECIFIC METER READING, ENTER MONTHS SINCE NEW/OVERHAUL

COMPONENT PART NUMBER		MIP CONTROL NO (MIP #)		MRC CODE
Q A	1ST QA INSP BY (PRINT/SIGN)	2ND QA INSP BY (PRINT/SIGN)	FINAL QA INSP BY (PRINT/SIGN)	V-2 MAINT OFFICER (PRINT/SIGN)

COMPONENT PART NUMBER

MANDATORY ENTRY FOR HARDCOPY AND OMMS.
ENTER THE PART NUMBER OF THE COMPONENT BEING WORKED ON. PART NUMBERS OF REPLACEMENT PIECE COMPONENTS FROM SUPPLY/PRE-EX BINS/ETC. SHOULD BE ANNOTATED IN THE MATERIAL CONTROL SECTION.

MIP CONTROL NO.

MANDATORY HARDCOPY ENTRY. OPTIONAL ENTRY IN OMMS.
A. PREVENTATIVE MAINTENANCE (PMS): THE MIP CONTROL NUMBER IS FOUND AT THE BOTTOM RIGHT CORNER OF THE MAINTENANCE INDEX PAGE. IT IS A FOUR-SEGMENT CODE. THE FIRST SEGMENT IDENTIFIES THE EQUIPMENT GROUP AND MAY CONTAIN FROM ONE TO THREE CHARACTERS FOLLOWED BY A DASH (-). THE SECOND SEGMENT IDENTIFIES A SPECIFIC SUBGROUP/COMPONENT NUMBER WITHIN AN EQUIPMENT GROUP AND MAY CONTAIN FROM ONE TO THREE CHARACTERS FOLLOWED BY A SLASH (/). THE THIRD SEGMENT IDENTIFIES A DISTINCT VERSION WITHIN THAT EQUIPMENT SUBGROUP AND MAY CONTAIN FROM ONE O THREE CHARACTERS FOLLOWED BY A DASH (-). THE FOURTH SEGMENT CONTAINS TWO CHARACTERS WHICH IDENTIFY THE MONTH AND YEAR THE MIP WAS PREPARED. PRELIMINARY MIPS WITHOUT MRCS ARE NUMBERED SEQUENTIALLY STARTING WITH "01" IN THE FOURTH SEGMENT TO IDENTIFY THE REVISION.

B. CORRECTIVE MAINTENANCE: IF A CORRECTIVE MAINTENANCE CARD WAS USED, ENTER THE CORRECTIVE MAINTENANCE MIP IN THIS BLOCK.

MRC CODE.

MANDATORY HARDCOPY ENTRY. OPTIONAL ENTRY IN OMMS.
A. PREVENTATIVE MAINTENANCE (PMS): THE TWO-PART MAINTENANCE REQUIREMENT CARD (MRC) CODE CONSISTS OF THE MIP SERIES CODE AND THE MRC PERIODICITY CODE. IT IS FOUND IN THE UPPER RIGHT HAND CORNER OF THE MRC CARD. MRCS APPLICABLE TO MORE THAN ONE MIP SERIES WILL HAVE
EACH MIP SERIES LISTED IN THIS BLOCK. ENTER ONLY THE CODE APPROPRIATE TO THE PARTICULAR EQUIPMENT ON WHICH MAINTENANCE IS BEING PERFORMED. AUTHORIZED MAINTENANCE REQUIREMENT PERIODICITIES ARE FOUND IN OPNAVINST 4790.4, SHIP'S MAINTENANCE AND MATERIAL MANAGEMENT (3-M) MANUAL.
B. CORRECTIVE MAINTENANCE: IF A CORRECTIVE MAINTENANCE CARD WAS USED, ENTER THE CORRECTIVE MAINTENANCE CARD NUMBER IN THIS BLOCK.

1ST QA INSP.

MANDATORY ENTRY FOR HARDCOPY AND OMMS (WHEN APPLICABLE).
PRINT AND SIGN NAME OF THE FIRST INSPECTOR FOR MAINTENANCE IF MORE THAN ONE QUALITY ASSURANCE SIGNATURE (QAI/CDQAI/CDI) IS REQUIRED. **DO NOT USE THIS BLOCK IF ONLY ONE QAI OR CDI SIGNATURE IS REQUIRED.**

2ND QA INSP.

MANDATORY ENTRY FOR HARDCOPY AND OMMS (WHEN APPLICABLE).
PRINT AND SIGN NAME OF SECOND QA INSPECTOR (QAI/CDQAI/CDI) WHEN MORE THAN TWO QA SIGNATURES ARE REQUIRED. **DO NOT USE THIS BLOCK IF ONLY ONE OR TWO QA SIGNATURES ARE REQUIRED.**

FINAL QA INSP.
MANDATORY ENTRY FOR HARDCOPY AND OMMS.
PRINT AND SIGN NAME OF INSPECTOR FOR A MAINTENANCE ACTION THAT REQUIRES ONLY ONE QA SIGNATURE (QAI/CDQAI/CDI). ENTER THE RATE AND NAME OF THAT INSPECTOR IN THIS BLOCK. FOR A MAINTENANCE ACTION THAT REQUIRES MORE THAN ONE QA SIGNATURE (QAI/CDQAI/CDI), ENTER THE RATE AND NAME OF THE FINAL INSPECTOR AS APPROPRIATE. THIS WILL NORMALLY BE THE FINAL FUNCTIONAL TEST QAI OR CDI.

NOTE: IF ONLY ONE QAI/CDQAI/CDI SIGNATURE IS REQUIRED, ENTER THAT INSPECTOR'S NAME AND SIGNATURE IN THE FINAL QA INSP. BLOCK.

V-2 MAINT OFF.
MANDATORY ENTRY FOR HARDCOPY AND OMMS.
V-2 ALRE MAINTENANCE OFFICER'S RANK, PRINTED NAME AND SIGNATURE.

MATERIAL CONTROL			VIDS/MAF JCN:	VIDS/MAF JCN:
QNTY	NOMENCLATURE	PART NUMBER	CONTRACT NUMBER	ALRE TOOL CONTROL
				ARE ALL TOOLS ACCOUNTED FOR?
				YES ☐ ☐ NO
				W/C TOOL PO (PRINT/SIGN)
				YES ☐ ☐ NO
				CENTRAL TOOL PO (PRINT/SIGN)
				NOTE: A LOST/MISSING/BROKEN TOOL REPORT MUST ACCOMPANY THIS MAF IF THE "NO" BLOCK IS CHECKED
				PAGE OF

VIDS/MAF JCN.

REFER TO PARAGRAPH 9.9 IN 4790.15D.

QTY (QUANTITY)
ENTER THE TOTAL NUMBER OF ITEMS OF THIS SPECIFIC NOMENCLATURE, PART UMBER AND CONTRACT NUMBER BEING REQUISITIONED.

NOTE: WHEN PARTS ARE ORDERED, THE REQUISITION NUMBER SHALL BE ANNOTATED ON THE CORRESPONDING ALRE MAF CARD.

NOMENCLATURE.
ENTER THE NOMENCLATURE OF THE ITEM BEING REQUISITIONED.

PART NUMBER.
ENTER THE PART NUMBER OF THE ITEM BEING REQUISITIONED.

CONTRACT NUMBER.
ENTER THE CONTRACT NUMBER OF THE REQUISITIONED ITEM. THIS NUMBER IS USED IN THE INSTALLED PARTS SECTION OF THE INSTALLED/DISCREPANT PARTS LIST (I/DPL) DATABASE.

ALRE TOOL CONTROL.
THE WORK CENTER SUPERVISOR AND CENTRAL TOOL PETTY OFFICERS WILL "X" THE APPROPRIATE BOX TO INDICATE THAT ALL TOOLS CHECKED OUT FOR THIS MAINTENANCE ACTION HAVE BEEN (OR WERE NOT) ACCOUNTED FOR. WORK CENTER TOOL P.O.'S PRINTED RATE/NAME AND SIGNATURE INDICATE ALL WORK CENTER TOOLS ARE/ARE NOT ACCOUNTED FOR. CENTRAL TOOL P.O.'S PRINTED RATE/NAME AND SIGNATURE INDICATES HE/SHE HAS REVIEWED THE TOOL CHIT AND ATTACHED IT TO THIS MAF. (A LOST/MISSING/BROKEN TOOL REPORT MUST ACCOMPANY THE MAF IF A "NO" BLOCK IS CHECKED.)

PAGE _ OF _ .

ENTER THE APPROPRIATE NUMBER IN EACH BLOCK. FOR EXAMPLE: "PAGE 1 OF 1" WOULD INDICATE THAT THERE WERE NO CONTINUATION SHEETS USED. THE ENTRY "PAGE 2 OF 3" WOULD IDENTIFY THE PAGE AS THE SECOND OF THREE PAGES.

NOTE: CONTINUATION PAGES ARE NORMALLY USED TO ADD ADDITIONAL REMARKS IN BLOCK 35 REMARKS/DESCRIPTION AND TO ANNOTATE ADDITIONAL PARTS IN THE MATERIAL CONTROL SECTION. OMMS IS LIMITED TO FOUR CONTINUATION PAGES WHEN ADDING ADDITIONAL REMARKS/DESCRIPTION (BLOCK 35) COMMENTS.

Appendix C
ALRE Malfunction and Corrosion Codes

ALRE MALFUNCTION CODES

Identifying and reporting correct ALRE Malfunction Codes is vital to the continuing equipment improvement and engineering analysis programs at NAVAIRWARCENACDIV Lakehurst.

Malfunction Code: 1st DIGIT (When Discovered)

0 - No defect; planned maintenance
1 - No defect; precautionary maintenance
2 - During operations
3 - During pre/post operational inspection
4 - During planned maintenance
5 - During non PMS inspection
6 - Removal/replacement directed by higher authority
7 - Equipment damaged by malfunction of associated equipment

Malfunction Code: 2nd DIGIT (Extent of Damage)

0 - No failure
1 - Catastrophic failure (failure damaged other equipment)
2 - Serious failure (unit mission degraded until repaired, i.e., C-2 CASREP)
3 - Major failure (equipment down until outside assistance repairs)
4 - Minor failure (equipment down until repair by ships force personnel)
5 - Degraded condition (equipment operable with limitation)

Malfunction Code: 3rd DIGIT (Type of Malfunction)

0 - No defect
1 - Corrosion
2 - Burned/overheated
3 - Broken, bent, deformed
4 - Out of adjustment
5 - Jammed, binding
6 - Failed NDI
7 - Abnormal operation
8 - Falls outside normal acceptable parameters
9 - Abnormal wear
A - Scored, gouged
B - Long A/G ram travel
C - Excessive catapult endspeed
D - Electrical/electronic component failure
E – Leaking

ALRE CORROSION CONTROL CODES

When using OMMS NG, corrosion control codes shall be annotated in the "Additional ALREMP Data" section of OPNAV 4790/160 and then entered into OMMS. This note also applies to ALRE shore test facilities documenting ALRE maintenance via micro-OMMS.

Specific requirements for documenting ALRE corrosion control data follows:

a. When corrosion is present, and is treated/removed during the course of normal scheduled or unscheduled maintenance, use of ALRE corrosion control codes will be mandatory. However, the third digit of the ALRE Malfunction Code will reflect the original discrepancy.

b. If corrosion is present and cannot be corrected during the course of normal scheduled or unscheduled maintenance because of time, operational, manpower, or material limitations/constraints, a separate ALRE MAF to defer correction of the corrosion discrepancy will be submitted. Use of corrosion codes on the original MAF will be mandatory.

c. When maintenance is performed specifically to correct a corrosion discrepancy, the third digit of the ALRE Malfunction Code will be "1" (corrosion). When this code is entered, use of the correct ALRE corrosion control codes will be mandatory.

NOTE
Corrosion prevention/control efforts shall be documented in conjunction with PMS and ALRE corrective maintenance actions. A separate ALRE MAF shall be initiated to document corrosion control that is not accomplished during a specific corrective or PMS maintenance action.

Corrosion Code: 1st DIGIT (Type Corrosion)

0 - No Corrosion Present

1 - Uniform Attack
Uniform attack is the most common type of corrosion and is characterized by uniform corrosion, or rusting, over an area of a metal surface. Corrosion on steel produces red or brown "rust", while corrosion of aluminum or zinc produces a white powdery corrosion product.

2 - Pitting Corrosion
Pitting corrosion is a type of localized corrosion. Pitting is characterized by the formation of "pits", holes or cavities in

the surface of the metal. The pits may be surrounded or covered by corrosion debris, so the actual pits may not be apparent until the debris is removed. Pitting corrosion is especially serious on piping or tubing because it may proceed until the pipe or tube leaks. Pitting corrosion occurs mostly on stainless steel and aluminum parts.

3 - Crevice Corrosion
Crevice corrosion occurs where there is a joint with a tight space or opening - a crevice - formed between at least two surfaces. Crevice corrosion is a localized form of corrosion, and is limited to the joint between the metals. The full extent of crevice corrosion may not be apparent until the parts are disassembled.

4 - Exfoliation (Flaking)
Exfoliation is a type of severe uniform corrosion. The corrosion has proceeded to the point where actual flakes of rust are loosened and can be removed. Exfoliation almost always occurs on steel, but may be found on aluminum.

Corrosion Code: 2nd DIGIT (Corrosion Action Taken)

0 - No Corrosion Control Action Required

1 - Remove corrosion; apply oil, grease, preservative.
No coating is applied other than a film of oil, grease, or a preservative such as "P1", "P2," or AMLGuard.

2 - Remove corrosion; apply temporary coating.
A temporary coating is one that is not prescribed in the applicable manual or MRC for correcting the corrosion problem. Temporary coatings are those which are not intended to be a permanent solution, just one which will be adequate until enough time or the proper materials (coating, etc.) are obtained. A temporary coating might be primer or other coating from a spray can.

3 - Remove corrosion; apply approved coating.
An approved coating is one that is specified by an MRC or a Corrosion Control Manual for the permanent solution to an identified corrosion problem. An approved coating may be a two-coat epoxy coating applied following careful surface preparation.

4 - Remove part for IMA/Depot corrosion control.

5 - No corrosion control action; deferral submitted.

Appendix D

Forms and Reports

1. The forms listed in this appendix have been developed from a variety of originators and all play a relevant part in the ALREMP program. Forms with national stock numbers (NSNs) should be ordered using NAVSUP P-2002 or through GSA. The following notes provide further information for obtaining listed forms:

NOTES

NOTE A: Local reproduction. User activities are to make copies and use as required.

NOTE B: Refer to MEASURE User's Manual (OPNAV 43P6A).

NOTE C: Available from Fleet Technical Support Center (Atlantic/ Pacific).

NOTE D: Available from GSA.

2. Retention period is indicated below, based on reporting requirements. If no specific retention period is listed, refer to applicable instructions for guidelines.

a. Retain for 1 COH/PIA cycle

FORMS (IN NUMERICAL ORDER)

- CASUALTY REPORT - SEE NOTE A

- DEPARTURE FROM SPECIFICATION - SEE NOTE A

- EQUIPMENT IDENTIFICATION CODES (EIC) (MSO4790.E2579)

- MAF CARD - SEE NOTE A

- ON-THE-JOB-TRAINING (OJT) CHECKLIST - SEE NOTE A

- OPTAR ACCOUNTING/REPORTS (NAVSUP P-3013/P-3073)

- QUALITY ASSURANCE DESIGNATION (ALRE) - SEE NOTE A

- STATUS MARKER CARDS - SEE NOTE A

Form 1511	CONFIGURATION SERVICE CHANGE STATUS - SEE NOTE A AND PARAGRAPH 2 a. OF THIS APPENDIX
DD Form 2332	PRODUCT QUALITY DEFICIENCY REPORT EXHIBIT (rev 01/99) 0102-LF-007-6400
NAVAIR 4423/1	SM&R CODE CHANGE REQUEST (rev 7/79) 0102-LF-604-4230
NAVSEA 4160/1	TECHNICAL MANUAL DEFICIENCY/EVALUATION REPORT (rev 5/89) 0116-LF-006-7700
OPNAV 1000/4A	MANPOWER AUTHORIZATION (rev 12/82) CHANGE REQUEST 0107-LF-010-0022
OPNAV 3710/6	NATOPS TACTICAL CHANGE RECOMMENDATION (rev 4/90) 0107-LF-009-7900
OPNAV 4790/CK	SHIP'S CONFIGURATION (rev 5/84) CHANGE FORM (CK) 0107-LF-047-9001
OPNAV 4790/2K	SHIP'S MAINTENANCE ACTION FORM (rev 6/75) (2-KILO) 0107-LF-047-9011
OPNAV 4790/2L	SUPPLEMENTAL FORM (2-LIMA)(rev 6/73) 0107-LF-770-3060
OPNAV 4790/2R	AUTOMATED WORK REQUEST (rev 11/73) (AWR) 0107-LF-770-3005
OPNAV 4790/7B	PMS FEEDBACK REPORT(rev 9/89) 0107-LF-007-8000
OPNAV 4790/11	MATERIAL REQUISITION REGISTER (rev 1/75) 0107-LF-047-9055
OPNAV 4790/33	TRAINING SYLLABUS (rev 3/73) 0107-LF-770-3701
OPNAV 4790/34	REQUIRED READING & MAINT INFORMATION RECORD (rev 10/69) 0107-LF-047-9170
OPNAV 4790/58	METROLOGY EQUIP RECALL & REPORT (METER) CARD (rev 5/75) - SEE NOTE B
OPNAV 4790/60	VISUAL INFORMATION DISPLAY SYSTEM/MAINTENANCE ACTION FORM (VIDS/MAF) (rev 5/88) 0107-LF-002-5900
OPNAV 4790/66	TECHNICAL PUBLICATIONS DEFICIENCY REPORT (TPDR) (CAT II)(rev 5/88) 107-LF-002-4400

OPNAV 4790/82 MAINTENANCE REQUIREMENTS CARDS (MRC) (rev 2/82) 0107-LF-047-9410 - SEE NOTE C

OPNAV 4790/160 ALRE MAINTENANCE ACTION FORM (MAF) (FOR SNAP I OMMS)(9/93) 0107-LF-016-5900

OPNAV 5070/11 NWPL CATALOG CARD (rev 9/75) 0107-LF-050-7055

OPNAV 5070/12 CHANGE ENTRY CERTIFICATION (rev 7/79) 0107-LF-050-7062

FORMS (IN ALPHABETICAL ORDER)

ALRE MAINTENANCE ACTION FORM (MAF) (FOR OMMS NG)(OPNAV 4790/160) (9-93) 0107-LF-016-5900

AUTOMATED WORK REQUEST (AWR) (OPNAV 4790/2R) (rev 11/73) 0107-LF-770-3005

CASUALTY REPORT - SEE NOTE A

CHANGE ENTRY CERTIFICATION (OPNAV 5070/12) (rev 7/79) 0107-LF-050-7062

CONFIGURATION SERVICE CHANGE STATUS (Form 1511) - SEE NOTE A AND PARAGRAPH 2 a. OF THIS APPENDIX

DEPARTURE FROM SPECIFICATION - SEE NOTE A

EQUIPMENT IDENTIFICATION CODES (EIC) (MSO4790.E2579)

MAF CARD - SEE NOTE A

MAINTENANCE REQUIREMENTS CARDS (MRC) (OPNAV 4790/82) (rev 2/82) 0107-LF-047-9410 - SEE NOTE C

MANPOWER AUTHORIZATION CHANGE REQUEST (OPNAV 1000/4A) (rev 12/82) 0107-LF-010-0022

MATERIAL REQUISITION REGISTER (OPNAV 4790/11) (rev 1/75) 0107-LF-047-9055

METROLOGY EQUIP RECALL & REPORT (METER) CARD (OPNAV 4790/58) (rev 5/75) - SEE NOTE B

NWPL CATALOG CARD (OPNAV 5070/11) (rev 9/75) 0107-LF-050-7055

ON-THE-JOB-TRAINING (OJT) CHECKLIST - SEE NOTE A

OPTAR ACCOUNTING/REPORTS (NAVSUP P-3013/P-3073)

PMS FEEDBACK REPORT (OPNAV 4790/7B) 0107-LF-007-8000 (rev 9/89)

QUALITY ASSURANCE DESIGNATION (ALRE) - SEE NOTE A

REQUIRED READING & MAINTENANCE INFORMATION RECORD (OPNAV 4790/34)(rev 10/69) 0107-LF-047-9170

SHIP'S CONFIGURATION CHANGE FORM (CK) (OPNAV 4790/CK) (rev 5/84) 0107-LF-047-9001

SHIP'S MAINTENANCE ACTION FORM (2-KILO) (OPNAV 4790/2K) (rev 6/75) 0107-LF-047-9011

SUPPLEMENTAL FORM (2-LIMA) (OPNAV 4790/2L) (rev 6/73) 0107-LF-770-3060

SM&R CODE CHANGE REQUEST (NAVAIR 4423/1) (rev 7/79) 0102-LF-604-4230

STATUS MARKER CARDS - SEE NOTE A

TECHNICAL MANUAL DEFICIENCY/EVALUATION REPORT (NAVSEA 4160/1)(rev 5/89) 0116-LF-006-7700

TECHNICAL PUBLICATIONS DEFICIENCY REPORT (TPDR) (CAT II) (OPNAV 4790/66) (rev 5/88) 107-LF-002-4400 - SEE NOTE D

TRAINING SYLLABUS OPNAV 4790/33 (rev 3/73) 0107-LF-770-3701

VISUAL INFORMATION DISPLAY SYSTEM/MAINTENANCE ACTION FORM (VIDS/MAF) (OPNAV 4790/60) (rev 5/88) 0107-LF-002-5900

Appendix E

Sample ALREMP Forms

FIG #	SUBJECT	PAGE
E-1	Catapult Pre-Operational Data (Sheet 1 of 2)	E-2
E-2	Catapult Pre-Operational Data (Sheet 2 of 2)	E-3
E-3	Catapult Post-Operational Data	E-4
E-4	RRE Traverse Carriage Slipper Clearances	E-5
E-5	Roto Launching Valve Dry Cycle Data (Sheet 1 of 2)	E-7
E-6	Roto Launching Valve Dry Cycle Data (Sheet 2 of 2)	E-8
E-7	Water Brake and Piston Assembly Data (Sheet 1 of 2)	E-9
E-8	Water Brake and Piston Assembly Data (Sheet 2 of 2)	E-10
E-9	Shuttle and Connector Wear Data	E-11
E-10	Hydraulic Pump Performance Data	E-12
E-11	Hydraulic Fluid History Report	E-13
E-12	Launching Valve Low Pressure Actuation	E-14
E-13	Arresting Gear Pre-Operational Data	E-15
E-14	Arresting Gear Post-Operational Data	E-16
E-15	High-Speed Spacer Wear Data	E-17
E-16	Cable Guide Wear Data	E-18
E-17	CROV Drive System Pulley Wear Data	E-19
E-18	Anchor Damper Slipper Clearances	E-20
E-19	Crosshead Slipper Clearances	E-21
E-20	Sheave Damper Slipper Clearances	E-22
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CATAPULT PRE-OPERATIONAL DATA

CATAPULT NO. _____ DATE _____ TIME_____

CONSOLE/ICCP_____ STEAM PRESS. _____ PSI TEMP. _____ °F

DECKEDGE/ICCS_____ RECEIVER WATER LEVEL _____ IN.

RETRACTION ENGINE_____ HYD. PRESS. _____ PSI TEMP. _____ °F

WATER BRAKES_____ GRAVITY TANK LEVEL _____ GAL.

NOSE GEAR LAUNCH_____ LUBE OIL TANK LEVEL _____ GAL.

JBD_____ S/P PHONES UP _____ DOWN_____

FLIGHT DECK_____ JBD WATER PRESS. _____ PSI

CENTER DECK_____ STEAM SMOTHER UP _____ DOWN_____

CAT ELECTRICIAN_____ SAFETY LIGHTS UP _____ DOWN_____

MEGOHMS: LL1 _____ LL2 _____ F/S_____

WATER BRAKE DATA

WATER LEVEL _____ IN.; TEMP _____ °F

TANK SKIMMED YES _____ NO

SENSORS (OPEN) _____ PSI

SENSORS (CLOSE) _____ PSI

	ALPHA PUMP	BRAVO PUMP
DISCHARGE	_____PSI	_____ PSI
ELBOW	_____PSI	_____ PSI
VACUUM	_____PSI	_____ PSI

BLOWTHROUGH NO LOAD DATA

CSV	CLOCK #1 TIME	CLOCK #2 TIME	ELONG. IN/OUT	END SPEED
100	_____	_____	_____/_____	_____
100	_____	_____	_____/_____	_____
100	_____	_____	_____/_____	_____
100	_____	_____	_____/_____	_____

CLOCK #1 ALLOWABLE RANGE _____ TO _____

CLOCK #2 ALLOWABLE RANGE _____ TO _____

CLOCK #2 MARGINAL RANGE _____ TO _____

NOTE: FOR STANDARD NO LOADS, ENTER ONLY DATA REQUIRED. DISREGARD CLOCK RANGE DATA

Catapult Pre-Operational Data (Sheet 1 of 2)

Figure E-1. Catapult Pre-Operational Data (Sheet 1 of 2)

DECK TENSIONER DATA

DYNO FORCE _____ _____ _____

HYD PRESSURE _____ HIGH_____ LOW_____

SUSPEND SWITCHES COC_____ M/C_____ CCP_____ W/B_____ PRI-FLY _____

BOLTS	RETAINER RAILS	LOCKING KEYS	WATER BRAKE PLATE	FDNGL PLATE	WING VOID COVERS
NUMBER MISSING					

CAT CAPTAIN _____ **MAINT. CHIEF** _____

CAT CHIEF _____ **MAINT. OFFICER** _____

Catapult Pre-Operational Data (Sheet 2 of 2)

Figure E-2. Catapult Pre-Operational Data (Sheet 2 of 2)

CATAPULT POST-OPERATIONAL DATA

CATAPULT NO. _____ DATE _____ TIME_____

CONSOLE/CCP_____ CATAPULT AIRCRAFT SHOTS TODAY _____

DECKEDGE/ICCS_____ CATAPULT NO-LOAD SHOTS TODAY _____

RETRACTION ENGINE_____ STRIP TENSIONERS

WATER BRAKES_____ INBD _____ IN. OUTBD _____ IN.

FDNGL_____ WATER BRAKES

JBD_____ WATER LEVEL _____ IN. OIL _____ IN.

FLIGHT DECK_____ OIL LEVEL

CENTER DECK_____ OIL LEVEL_____ GAL. USED TODAY _____GAL.

CAT ELECTRICIAN_____ LUBE OIL ADDED _____GAL.

LAUNCHING ACCESSORY DATA

HOLDBACK BAR	SERIAL NUMBER	SHOTS TODAY	SHOTS UNTIL PMS	TOTAL SHOTS	STATUS (UP/DOWN)
E-2/EA-6B/C-2					
E-2/EA-6B/C-2					
F-14					
F-14					
F/A-18					
F/A-18					
F/A-18E/F					
F/A-18E/F					
S-3					
S-3					

RELEASE ELEMENTS ON HAND: A-6 _____ S-3 _____

PMS COMPLETED THIS DATE:

CAT CAPTAIN _____ **MAINT. CHIEF**_____

CAT CHIEF _____ **MAINT. OFFICER**_____

Figure E-3. Catapult Post-Operational Data

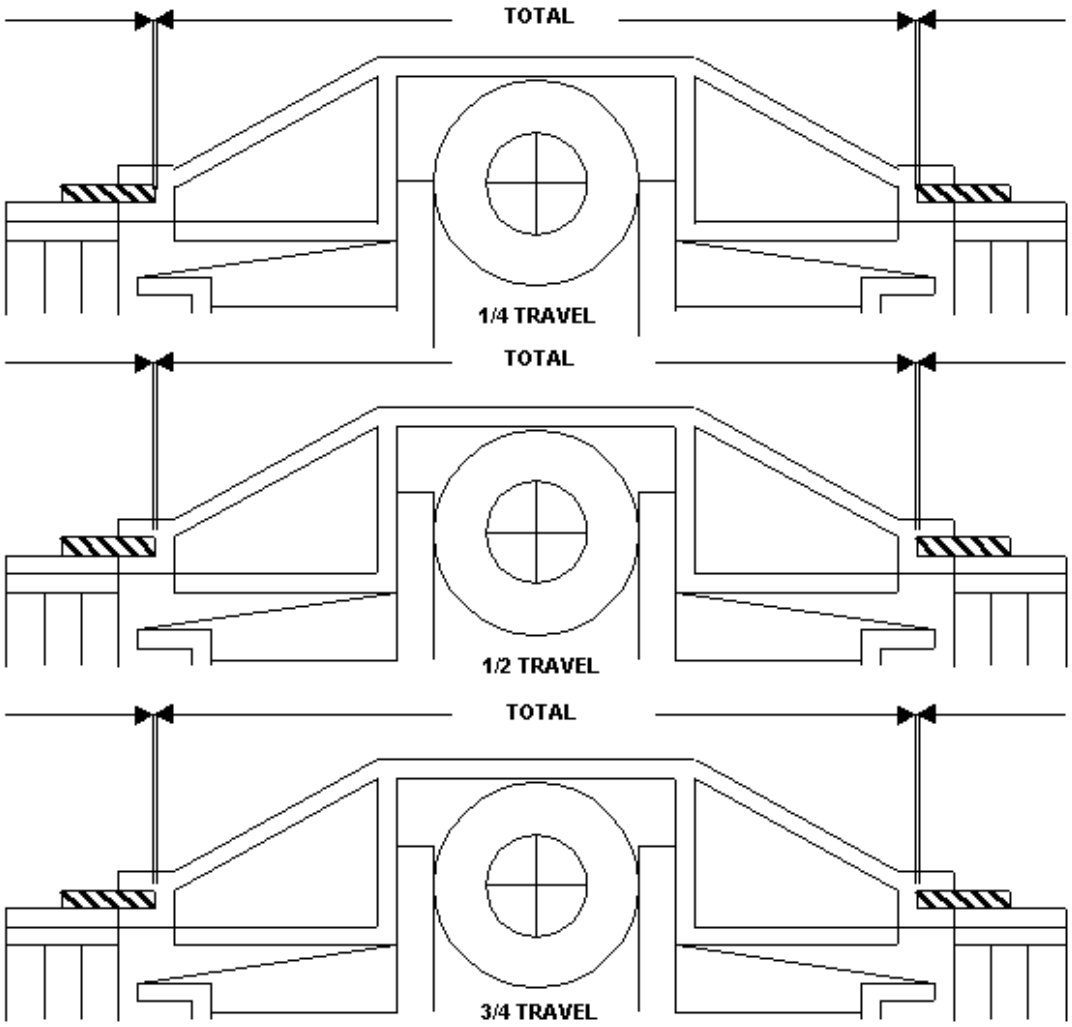
CATAPULT MAINTENANCE ACTION

CATAPULT NO. _____ DATE _____

JSN _____

SHOT NO. _____ SHOTS SINCE LAST INSP._____

RRE TRAVERSE CARRIAGE SLIPPER CLEARANCES



REMARKS:

MAINT MAIN _____ W/C SUPERVISOR _____

Q/A INSPECTOR _____ MAINT CHIEF / OFFICER _____

Figure E-4. RRE Traverse Carriage Slipper Clearances

CATAPULT MAINTENANCE ACTION

CATAPULT NO. _____ DATE _____

JSN _____

SHOT NO. _____ SHOTS SINCE LAST INSP._____

ROTO LAUNCHING VALVE DRY CYCLE DATA

DRY CYCLE COMPARISON (NORMS)

DATE TESTED _____ LV TEMP _____ °F HYD PRESS _____ PSI HYD TEMP _____ °F

CSV SETTING	50	100		150		250		300	
CLOCK TIMES	1 _____	1 _____	2 _____	1 _____	2 _____	1_____	2 _____	1 _____	2 _____

DRY CYCLE AVERAGES

DATE TESTED _____ LV TEMP _____ °F HYD PRESS _____ PSI HYD TEMP _____ °F

CLOCK TIMES (INCREASING CSV)

CYCLE	CSV 050	CSV 100		CSV 150		CSV 250		CSV 300	
	CLK 1	CLK 1	CLK 2	CLK 1	CLK 2	CLK 1	CLK 2	CLK 1	CLK 2
1									
2									
3									
4									
5									
AVG									

CLOCK TIMES (DECREASING CSV)

(NOT TO BE USED FOR ESTABLISHING NORMAL DRY CYCLE CLOCK TIMES)

CYCLE	CSV 300		CSV 100		CSV 150		CSV 250		CSV 050
NO.	CLK1	CLK 2	CLK 1	CLK 2	CLK 1	CLK 2	CLK 1	CLK 2	CLK 1
1									
2									
3									
4									
5									
AVG									

Figure E-5. Roto Launching Valve Dry Cycle Data (Sheet 1 of 2)

REMARKS: (INCLUDE REASON FOR ESTABLISHING NEW NORMS, IF APPLICABLE)

MAINT MAN _____ W/C SUPERVISOR _____

Q/A INSPECTOR _____ MAINT. CHIEF/OFFICER _____

Figure E-6. Roto Launching Valve Dry Cycle Data (Sheet 2 of 2)

CATAPULT MAINTENANCE ACTION

CATAPULT NO. _____ DATE _____

JSN_____ PMS BEING PERFORMED _____

SHOT NO. _____ SHOTS SINCE LAST INSP._____

WATER BRAKE AND PISTON ASSEMBLY DATA

FOOTPAD CLEARANCES

AFT		FWD

NOTE: ENTER ACTUAL MEASUREMENTS WHEN INSTALLING CYLINDERS. WHEN CHECKING ALIGNMENT AS PER MRC, ONLY ENTER X AT POINTS OF CONTACT.

CHOKE RING MEASUREMENTS

CHOKE TO ANULUS GAP (MAX):

PORT _____ STBD _____

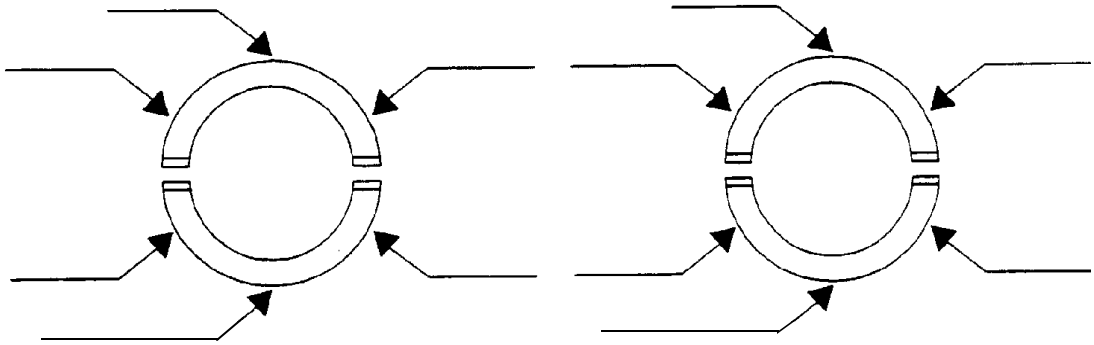
CHOKE RING ID (75º TEMP CORRECTION):

NOTE: ID MEASUREMENT REQUIRED ONLY IF NO-GO GAGE PASSES THROUGH

NO-GO GAGE

	PORT GO/NO-GO	STBD GO/NO-GO
	PORT	STBD
HORIZONTAL	_____	_____
VERTICAL	_____	_____
SUM	_____	_____

PORT BUTTRESS CLEARANCE STBD



MAINT. MAN _____ W/C SUPERVISOR _____

Q/A INSPECTOR _____ MAINT. CHIEF/OFFICER _____

Figure E-7. Water Brake and Piston Assembly Data (Sheet 1 of 2)

CATAPULT MAINTENANCE ACTION

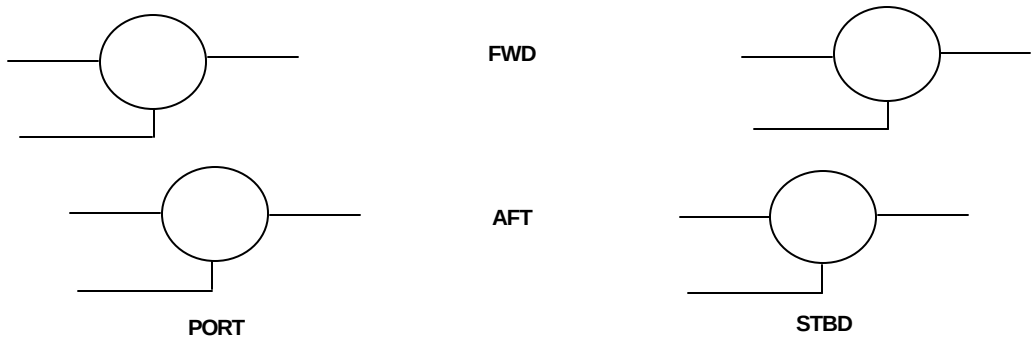
CATAPULT NO._____ DATE_____

JSN_____ PMS BEING PERFORMED _____

SHOT NO. _____ SHOTS SINCE LAST INSP._____

WATER BRAKE AND PISTON ASSEMBLY DATA

TELESCOPE CLEARANCE



NOTE: FOR AFT 6 O'CLOCK CLEARANCE, USE AVERAGE OF 5 AND 7 O'CLOCK READINGS

DEFLECTOR RING TO STRIKER RING CLEARANCE

PORT _____ STBD _____

NOTE: BUTTRESS, TELESCOPE AND STRIKER RING READINGS ARE REQUIRED ONLY AT INSTALLATION AND WHEN NEEDED FOR TROUBLESHOOTING WEAR OR ALIGNMENT PROBLEMS.

PISTON DIAMETER

PORT		STBD	
1/7 O'CLOCK	_____ IN.	1/7 O'CLOCK	_____ IN.
11/5 O'CLOCK	_____ IN.	11/5 O'CLOCK	_____ IN.

PISTON GUIDE WEAR

CYLINDER WALL TO DEFLECTOR RING CLEARANCES

	6 O'CLOCK	11 O'CLOCK	1 O'CLOCK
PORT	_____ IN.	_____ IN.	_____ IN.
STBD	_____ IN.	_____ IN.	_____ IN.

NOTE: TAKE 11 O'CLOCK AND 1 O'CLOCK READINGS WITH PISTON GUIDE JACKED UP FLUSH WITH INSIDE DIAMETER OF CYLINDER.

REMARKS:

MAINT. MAN _____ **W/C SUPERVISOR** _____

Q/A INSPECTOR _____ **MAINT. CHIEF/OFFICER** _____

Figure E-8. Water Brake and Piston Assembly Data (Sheet 2 of 2)

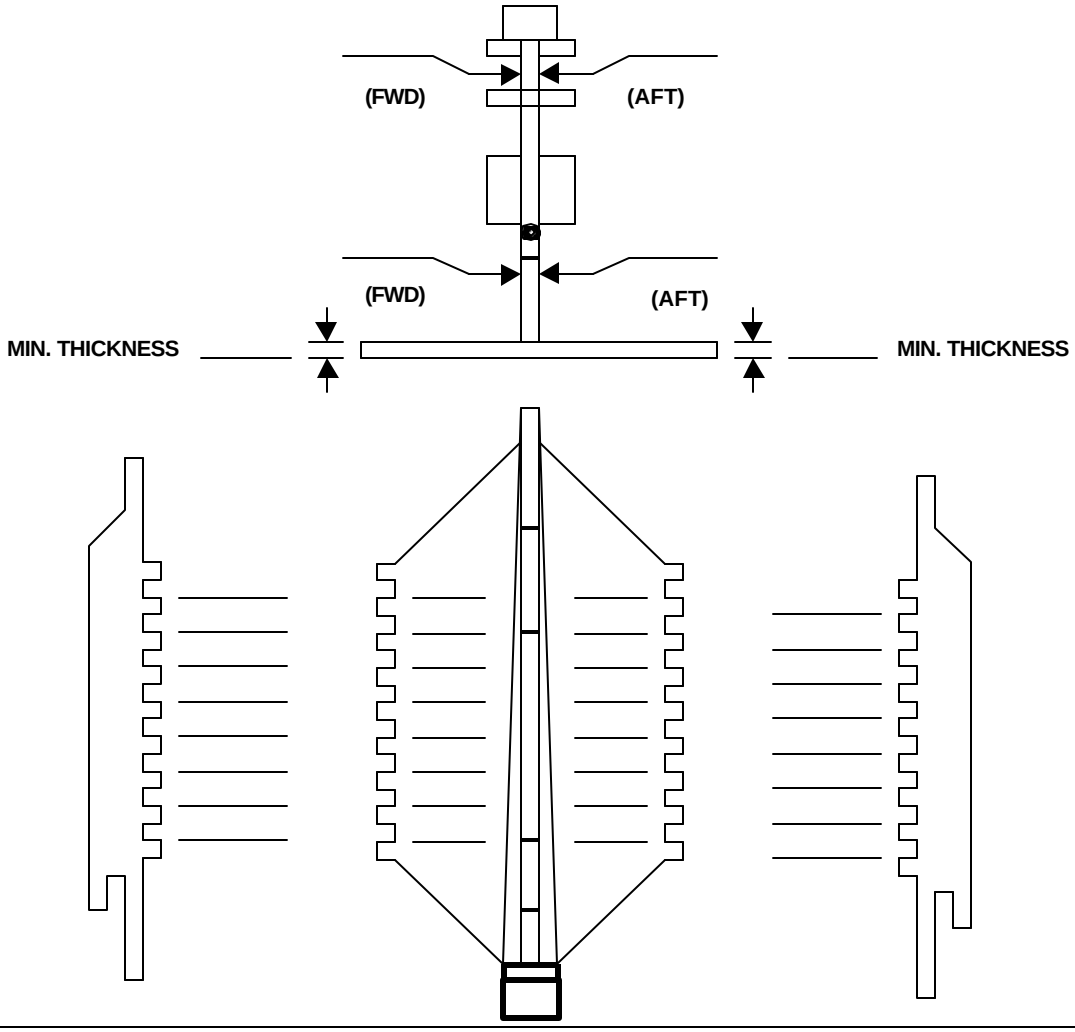
CATAPULT MAINTENANCE ACTION

CATAPULT NO. _____ **DATE**_____

JSN_____

SHOT NO. _____ **SHOTS SINCE LAST INSP.**_____

SHUTTLE AND CONNECTOR WEAR DATA



TOTAL SHOTS:	SHUTTLE	_____	CONNECTORS	L EFT _____	RIGHT _____
CONTRACT NO.:	SHUTTLE	_____	CONTRACT NO.	LEFT _____	
SERIAL NO.	SHUTTLE	_____	CONTRACT NO.	RIGHT_____	

REMARKS:

MAINT. MAN _____ **W/C SUPERVISOR** _____

Q/A INSPECTOR _____ **MAINT. CHIEF/OFFICER** _____

Figure E-9. Shuttle and Connector Wear Data

CATAPULT MAINTENANCE ACTION

CATAPULT NO. _____ DATE _____

JSN_____

SHOT NO. _____ SHOTS SINCE LAST INSP._____

HYDRAULIC PUMP PERFORMANCE DATA

PUMP A

OUTPUT _____ RELIEF VALVE SETTING _____ PSI

PUMP B

OUTPUT _____ RELIEF VALVE SETTING _____ PSI

PUMP C

OUTPUT _____ RELIEF VALVE SETTING _____ PSI

REMARKS:

MAINT. MAN _____ **W/C SUPERVISOR** _____

Q/A INSPECTOR _____ **MAINT. CHIEF/OFFICER** _____

Figure E-10. Hydraulic Pump Performance Data

CATAPULT MAINTENANCE ACTION

CATAPULT NO. _____ DATE _____

JSN _____

SHOT NO. _____ SHOTS SINCE LAST INSP._____

HYDRAULIC FLUID HISTORY REPORT

FLUID SAMPLE DATA

SAMPLE SERIAL NO _____

SYSTEM CAPACITY _____ GAL.

FLUID LEVEL _____ GAL.

FLUID HISTORY DATA

LAST COMPLETE FLUID SHOT NO. _____

REPLACEMENT DATE: _____

WATER ADDED

DATE _____	DATE _____	DATE _____
SHOT NO. _____	SHOT NO. _____	SHOT NO. _____
GALS. _____	GALS. _____	GALS _____

FLUID ADDED

DATE _____	DATE _____	DATE _____
SHOT NO. _____	SHOT NO. _____	SHOT NO. _____
GALS. _____	GALS. _____	GALS. _____

REMARKS:

MAINT. MAN _____ **W/C SUPERVISOR** _____

Q/A INSPECTOR _____ **MAINT. CHIEF/OFFICER** _____

Figure E-11. Hydraulic Fluid History Report

CATAPULT MAINTENANCE ACTION

CATAPULT NO. _____ DATE _____

JSN _____

SHOT NO. _____ SHOTS SINCE LAST INSP. _____

LAUNCHING VALVE LOW PRESSURE ACTUATION

LV TEMP. _____ °F HYD. FLUID TEMP. _____ °F

OPENING STROKE DATA

INITIAL PRESSURE	PRESSURE INCREASES AMOUNT	PRESSURE INCREASES DISTANCE	FINAL PRESSURE	OPENING TIME

CLOSING STROKE DATA

INITIAL PRESSURE	PRESSURE INCREASES AMOUNT	PRESSURE INCREASES DISTANCE	FINAL PRESSURE	CLOSING TIME

REMARKS:

MAINT. MAN _____ **W/C SUPERVISOR** _____

Q/A INSPECTOR _____ **MAINT. CHIEF/OFFICER** _____

Figure E-12. Launching Valve Low Pressure Actuation

ARRESTING GEAR PRE-OPS DATA

DATE _____ **TIME**_____

PRE-OP COMPLETED

ENGINE NO. 1 _____ ENGINE NO. 3 _____

ENGINE NO. 2 _____ ENGINE NO. 4 _____

BARRICADE ENGINE _____ BARRICADE POWER PACK _____

SHEAVE DAMPERS 1 **P**_____ **S**_____ SHEAVE DAMPERS 3 **P**_____ **S**_____

SHEAVE DAMPERS 2 **P**_____ **S**_____ SHEAVE DAMPERS 4 **P**_____ **S**_____

BB SHEAVE DAMPERS **P**_____ **S**_____ BELOW DECKS P.O. _____

FLIGHT DECK EQUIPMENT

PENDANT ENGINES _____

LSO STATION _____

DECKEDGE STATION _____

BARRICADE _____ Q/A _____

TOPSIDE P.O. _____

PRIMARY FLIGHT CONTROL _____

TOPSIDE

POWER PACK FLUID LEVEL POWER ON _____ AIR PRESSURE _____

OPERATOR _____ 2 AIR GUNS _____ TOPSIDE GEAR _____

TOOLS _____ OPERATOR _____

NUM. OF MISSING BOLTS	RETRACTABLE SHEAVES		IMPACT PAD RAILS		WIRE SUPPORTS		TERMINAL TO SHEAVE		X-STOP
	PORT	STBD	PORT	STBD			PORT	STBD	
A/G #1									
A/G #2									
A/G #3									
A/G #4									
BARRICADE ENGINE									

A/G LPO _____ **A/G CPO** _____

MAINT. CHIEF/ OFFICER _____

Figure E-13. Arresting Gear Pre-Operational Data

ARRESTING GEAR POST-OPS DATA

DATE _____ **TIME** _____

POST-OP COMPLETED

ENGINE NO. 1 _____ ENGINE NO. 3 _____

ENGINE NO. 2 _____ ENGINE NO. 4 _____

BARRICADE ENGINE _____ BARRICADE POWER PACK _____

SHEAVE DAMPERS 1 **P**_____ **S**_____ SHEAVE DAMPERS 3 **P**_____ **S**_____

SHEAVE DAMPERS 2 **P**_____ **S**_____ SHEAVE DAMPERS 4 **P**_____ **S**_____

BB SHEAVE DAMPERS **P**_____ **S**_____ BELOW DECKS P.O. _____

FLIGHT DECK EQUIPMENT

PENDANT ENGINES _____

LSO STATION _____

DECKEDGE STATION _____

BARRICADE _____

TOPSIDE P.O. _____

PRIMARY FLIGHT CONTROL _____

EQUIPMENT DATA

	NO. 1	NO. 2	NO. 3	NO.4	BARRICADE
RECOVERY NO.					
HITS ON P/C					
HEAVY HITS					
HITS ON CDP					
X-HEAD STOP					

CDPS ON DECK

NUM. OF MISSING BOLTS	RETRACTABLE SHEAVES		IMPACT PAD RAILS		WIRE SUPPORTS	TERMINAL TO SHEAVE	
	PORT	STBD	PORT	STBD		PORT	STBD
A/G #1							
A/G #2							
A/G #3							
A/G #4							
BARRICADE ENGINE							

A/G LPO _____ **A/G CPO** _____

MAINT. CHIEF/ OFFICER _____

Figure E-14. Arresting Gear Post-Operational Data

ARRESTING GEAR MAINTENANCE ACTION

ENGINE NO_____ DATE_____

JSN_____

HIT NO. _____ HITS SINCE LAST INSP._____

HIGH-SPEED SPACER WEAR DATA

FIXED SHEAVE ASSEMBLY

	28" SHEAVE		33" SHEAVE	
BASIC	_____	_____	_____	_____
DEPTH GAGE	_____	_____	_____	_____
FEELER GAGE	_____	_____	_____	_____
THICKNESS	_____	_____	_____	_____
WEAR	_____	_____	_____	_____
LATERAL STACK	_____	_____	_____	_____

CROSSHEAD ASSEMBLY

	28" SHEAVE		33" SHEAVE	
BASIC	_____	_____	_____	_____
DEPTH GAGE	_____	_____	_____	_____
FEELER GAGE	_____	_____	_____	_____
THICKNESS	_____	_____	_____	_____
WEAR	_____	_____	_____	_____
LATERAL STACK	_____	_____	_____	_____

NOTES:

(1) EACH MEASUREMENT SHALL BE TAKEN BY TWO PEOPLE AND RESULTS RECORDED IN COLUMNS PROVIDED.

(2) IF CALIPERS ARE USED TO MEASURE THICKNESS, DISREGARD DEPTH AND FEELER GAGE COLUMNS.

REMARKS:

MAINT. MAN_____ **A/G LPO/BRANCH CHIEF**_____

Q/A INSPECTOR_____ **MAINT. CHIEF/OFFICER**_____

Figure E-15. High-Speed Spacer Wear Data.

ARRESTING GEAR MAINTENANCE ACTION

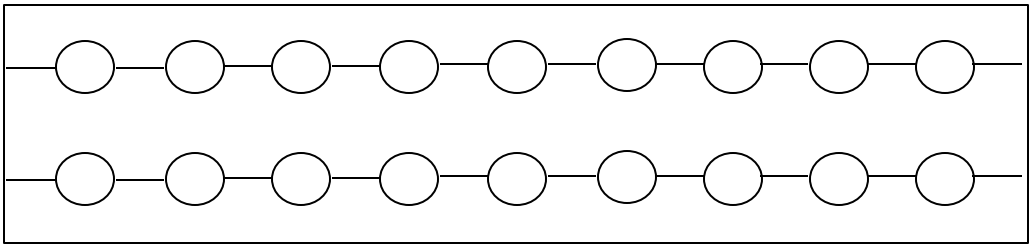
ENGINE NO. _____ **DATE** _____

JSN _____

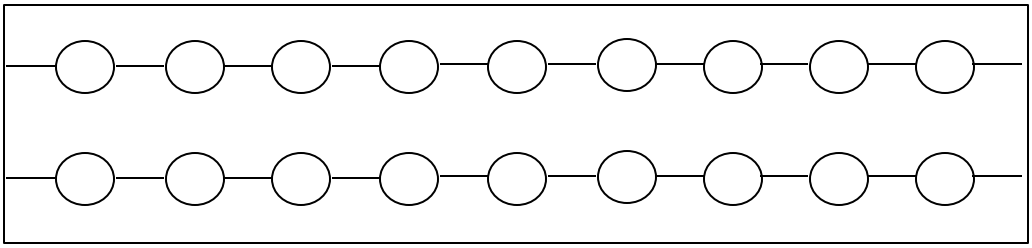
HIT NO. _____ **HITS SINCE LAST INSP.** _____

CABLE GUIDE WEAR DATA **CABLE GUIDE LOCATIONS**

UPPER GUIDE



LOWER GUIDE



REMARKS:

MAINT. MAN _____ **A/G LPO/CPO** _____

Q/A INSPECTOR _____ **MAINT. CPO/OFFICER** _____

Figure E-16. Cable Guide Wear Data

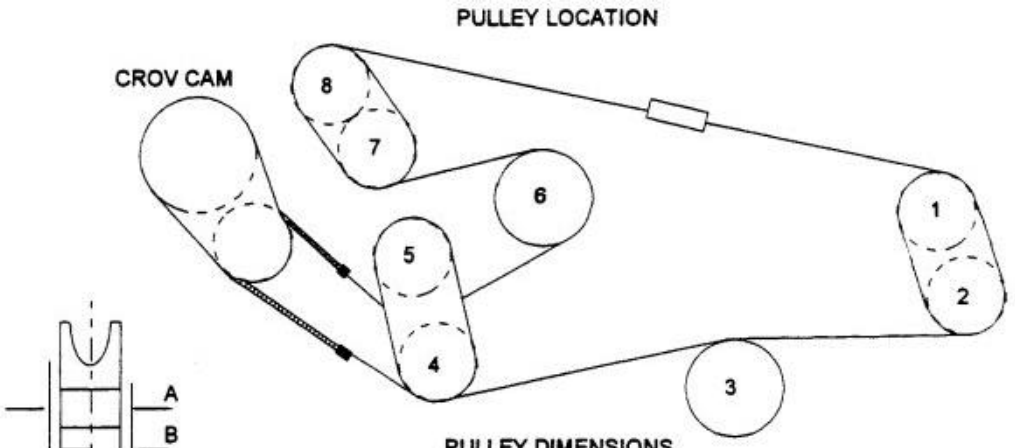
ARRESTING GEAR MAINTENANCE ACTION

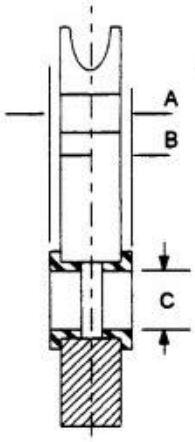
ENGINE NO. _____ DATE _____

JSN _____

HIT NO. _____ HITS SINCE LAST INSP. _____

CROV DRIVE SYSTEM PULLEY WEAR DATA





PULLEY DIMENSIONS

NO.	1	2	3	4	5	6	7	8
A.								
B.								
C.								
GROOVE DIA.								
AXLE DIA								

NOTE: 1. "A" IS BRACKET TO COVER DIMENSION

REMARKS:

MAINTENANCE MAN _____ A/G LPO/CPO _____

Q/A INSPECTOR _____ MAINT. CPO/OFFICER _____

Figure E-17. CROV Drive System Pulley Wear Data

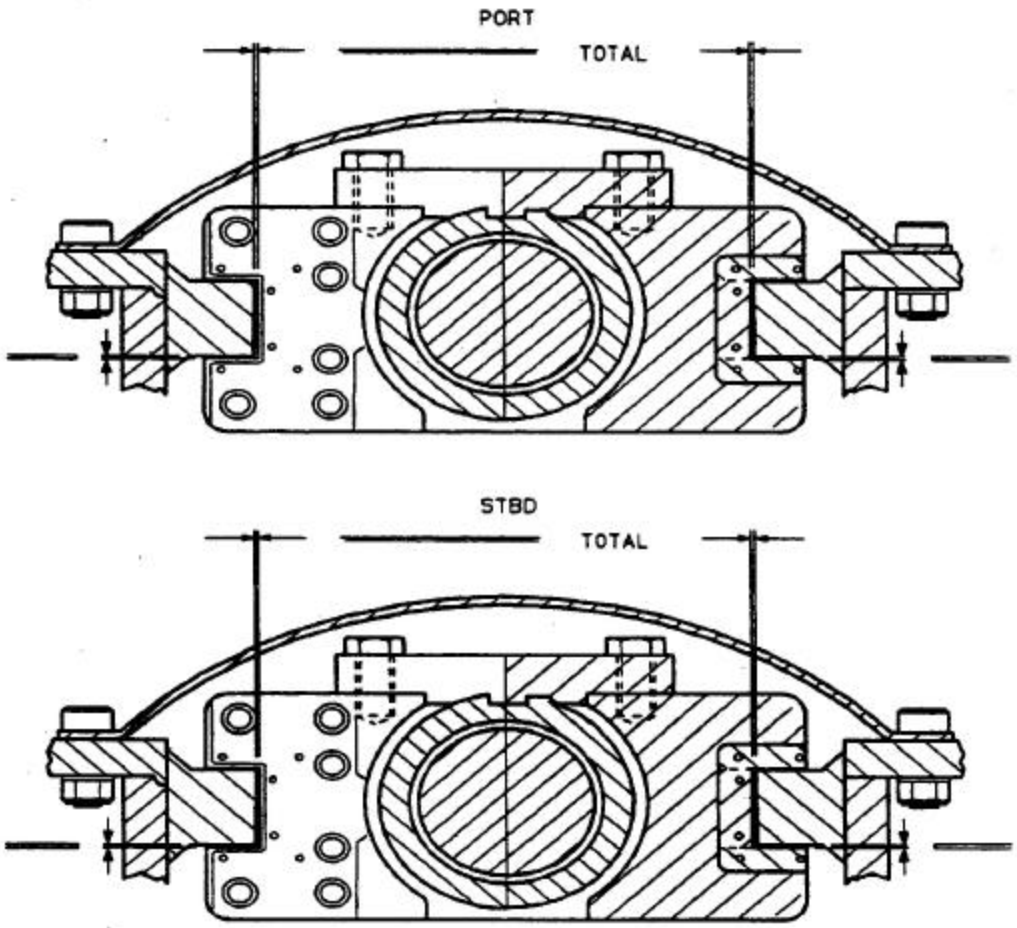
ARRESTING GEAR MAINTENANCE ACTION

ENGINE NO. _____ **DATE** _____

JSN _____

HIT NO. _____ **HITS SINCE LAST INSPECTION** _____

ANCHOR DAMPER SLIPPER CLEARANCES



REMARKS:

MAINTENANCE MAN _____ **A/G LPO/CPO** _____

Q/A INSPECTOR _____ **MAINT. CPO/OFFICER** _____

Figure E-18. Anchor Damper Slipper Clearances

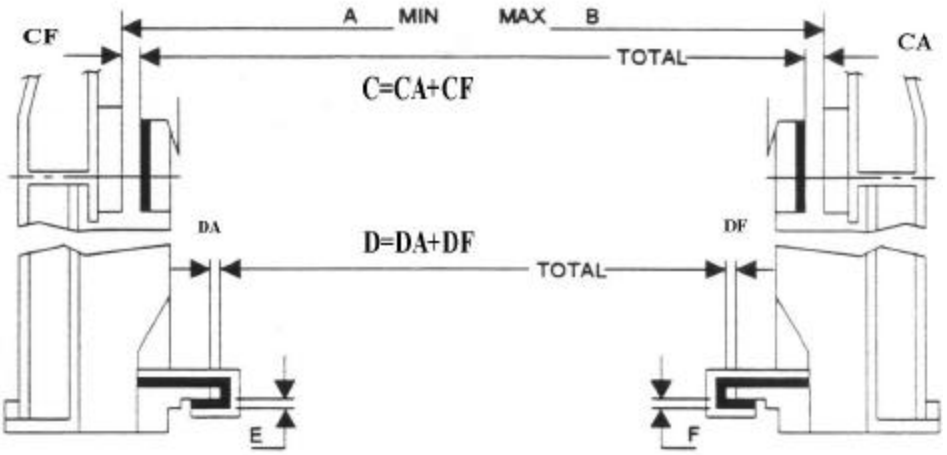
ARRESTING GEAR MAINTENANCE ACTION

ENGINE NO. _____ **DATE** _____

JSN _____

HIT NO. _____ **HITS SINCE LAST INSP.** _____

CROSSHEAD SLIPPER CLEARANCES



RAIL SPAN READINGS

1)_____ **2)**_____ **3)**_____ **4)**_____ **5)**_____

TRACK SPAN READINGS

1)_____ **2)**_____ **3)**_____ **4)**_____ **5)**_____

MEC END

CA _____ **IN.** **CF** _____ **IN.** **C** _____ **IN.**

DA _____ **IN.** **DF** _____ **IN.** **D** _____ **IN.**

E _____ **IN.** **F** _____ **IN.**

X-HEAD STOP END

CA _____ **IN.** **CF** _____ **IN.** **C** _____ **IN.**

DA _____ **IN.** **DF** _____ **IN.** **D** _____ **IN.**

E _____ **IN.** **F** _____ **IN.**

REMARKS:

MAINTENANCE MAN _____ **A/G LPO/CPO** _____

Q/A INSPECTOR _____ **MAINT. CPO/OFFICER** _____

Figure E-19. Crosshead Slipper Clearances

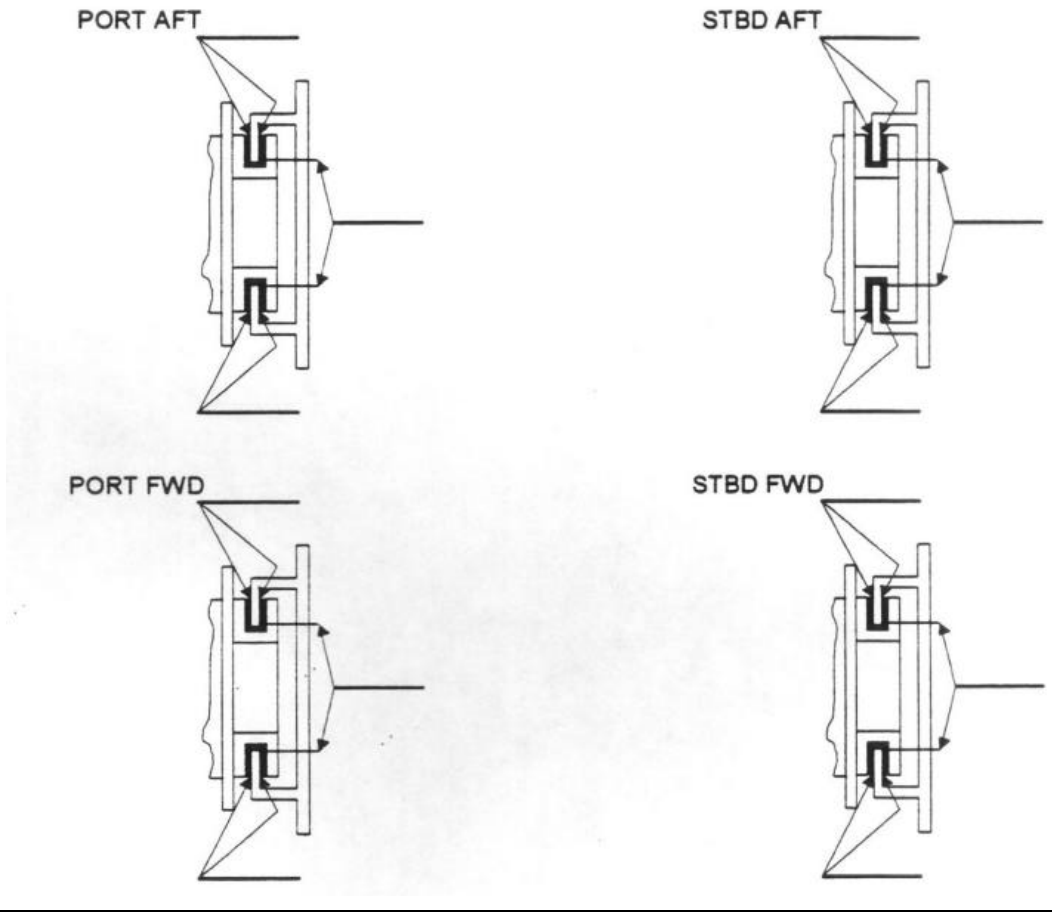
ARRESTING GEAR MAINTENANCE ACTION

ENGINE NO. _____ **DATE** _____

JSN _____

HIT NO. _____ **HITS SINCE LAST INSPECTION** _____

SHEAVE DAMPER SLIPPER CLEARANCES



REMARKS:

MAINTENANCE MAN _____ **A/G LPO/CPO** _____

Q/A INSPECTOR _____**MAINT. CPO/OFFICER** _____

Figure E-20. Sheave Damper Slipper Clearance

ARRESTING GEAR MAINTENANCE ACTION

ENGINE NO. _____ **DATE** _____

JSN _____

HIT NO. _____ **HITS SINCE LAST INSPECTION** _____

ENGINE SHEAVE WEAR DATA **FLIGHT DECK RUNOUT** _____

X-HEAD END SHEAVE ASSEMBLY

33 INCH SHEAVE BANK

SHV#	B	1/32	1/16	3/32	1/8	5/32	3/16
1							
3							
5							
7							
9							
11							
13							
15							
17							

28 INCH SHEAVE BANK

SHV#	B	1/32	1/16	3/32	1/8	5/32	3/16
35							
33							
31							
29							
27							
25							
23							
21							
19							

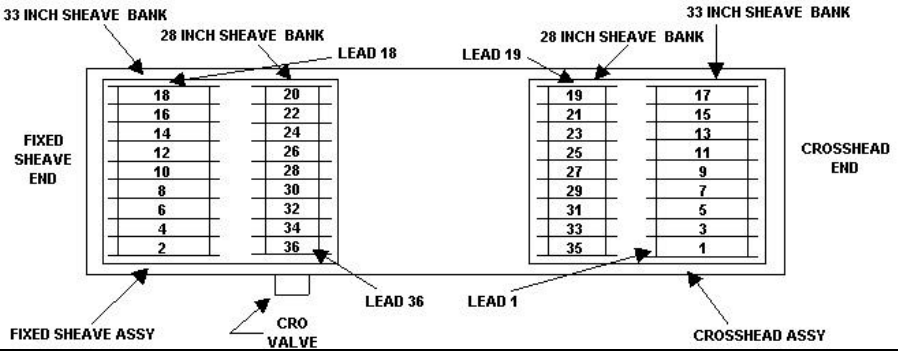
FIXED END SHEAVE ASSEMBLY

33 INCH SHEAVE BANK

SHV#	B	1/32	1/16	3/32	1/8	5/32	3/16
2							
4							
6							
8							
10							
12							
14							
16							
18							

28 INCH SHEAVE BANK

SHV#	B	1/32	1/16	3/32	1/8	5/32	3/16
36							
34							
32							
30							
28							
26							
24							
22							
20							



MAINTENANCE MAN _____ **A/G LPO/CPO** _____

Q/A INSPECTOR _____ **MAINT. CPO/OFFICER** _____

Figure E-21. Engine Sheave Wear Data

ARRESTING GEAR MAINTENANCE ACTION

ENGINE NO.____________ **DATE**________________

JSN_____________

ENGINE HIT NO.____________ **HITS SINCE LAST INSPECTION**______________

SHEAVE WEAR DATA

A: SHEAVE THROAT DEPTH
B: SHEAVE SPACER READING
C: PHENOLIC SPACER THICKNESS
D: CEMENTED PHENOLIC SECURITY

SHEAVE # ____________________

A: ______ ______ ______ ______
B: ______ ______ ______ ______
C: ______ ______ ______ ______
D: **SAT / UNSAT**

SHEAVE # ____________________

A: ______ ______ ______ ______
B: ______ ______ ______ ______
C: ______ ______ ______ ______
D: **SAT / UNSAT**

SHEAVE # ____________________

A: ______ ______ ______ ______
B: ______ ______ ______ ______
C: ______ ______ ______ ______
D: **SAT / UNSAT**

SHEAVE # ____________________

A: ______ ______ ______ ______
B: ______ ______ ______ ______
C: ______ ______ ______ ______
D: **SAT / UNSAT**

SHEAVE # ____________________

A: ______ ______ ______ ______
B: ______ ______ ______ ______
C: ______ ______ ______ ______
D: **SAT / UNSAT**

SHEAVE # ____________________

A: ______ ______ ______ ______
B: ______ ______ ______ ______
C: ______ ______ ______ ______
D: **SAT /UNSAT**

SHEAVE # ____________________

A: ______ ______ ______ ______
B: ______ ______ ______ ______
C: ______ ______ ______ ______
D: **SAT /UNSAT**

SHEAVE # ____________________

A: ______ ______ ______ ______
B: ______ ______ ______ ______
C: ______ ______ ______ ______
D: **SAT /UNSAT**

SHEAVE # ____________________

A: ______ ______ ______ ______
B: ______ ______ ______ ______
C: ______ ______ ______ ______
D: **SAT /UNSAT**

SHEAVE # ____________________

A: ______ ______ ______ ______
B: ______ ______ ______ ______
C: ______ ______ ______ ______
D: **SAT /UNSAT**

REMARKS:

MAINT. MAN ______________________ **W/C SUPERVISOR**____________________________

Q/A INSPECTOR_____________________ **MAINT. CHIEF/OFFICER** _____________________

Figure E-22. Sheave Wear Data.

VLA MAINTENANCE ACTION

DATE _____ JSN_____

FRESNEL LENS, MK 6 MOD 3 ALIGNMENT, STABILIZATION AND POLE CHECK DATA

NOTE: REFER TO THE APPLICABLE MAINTENANCE REQUIREMENT CARD AND ENTER ONLY THE DATA REQUIRED FOR THE PERIODICITY INDICATED.

POWER SUPPLY DATA

+10V FOR +/-0.050 (UP TO 0.75 IS ACCEPTABLE)	15V FOR +/-0.30	+28V FOR +/-5.0
-10V FOR +/-0.050 (UP TO 0.75 IS ACCEPTABLE)	15V FOR +/-0.30	-28V FOR +/-5.0

BASIC ANGLE DATA

NOTE: PITCH AND ROLL SYNCHROS SET 0.000+/- 0.005 VDC

DAILY

POLE LOC	B/A SET	POLE HEIGHT (+/-1.0 IN)			RESP METER READING COMPUTER #1			(+/-3.0 MIN) COMPUTER #2	
FT	DEG	IDEAL	ACTUAL	ERROR	IDEAL	ACTUAL	ERROR	ACTUAL	ERROR
79	3.5				3 30'				
79	3.75				3 45'				
69	4.00				4 00'				
WEEKLY									
79	3.00				3 00'				
79	3.50				3 30'				
79	3.75				4 45'				
69	4.00				4 00'				
69	4.25				4 15'				
69	4.50				4 30'				

MAINT. MAN _____ **BRANCH LPO/CHIEF** _____

Q/A INSPECTOR _____ **MAINT. CHIEF/OFFICER** _____

Figure E-23. Fresnel Lens, MK 6 MOD 3 Alignment, Stabilization and Pole Check Data (Sheet 1 of 5)

VLA MAINTENANCE ACTION

DATE _____ JSN _____

FRESNEL LENS, MK 6 MOD 3 ALIGNMENT, STABILIZATION AND POLE CHECK DATA

NOTE: REFER TO THE APPLICABLE MAINTENANCE REQUIREMENT CARD AND ENTER ONLY THE DATA REQUIRED FOR THE PERIODICITY INDICATED.

HOOK TO EYE DISTANCE DATA

	(DAILY/WEEKLY/SEMIANNUALLY)					(SEMIANNUALLY)				
HOOK TO EYE SET	RESP METER READING			(+/-6.0 MIN)		POLE HEIGHT			(+/-6.0 IN)	
	COMPUTER #1			COMPUTER #2		COMPUTER #1			COMPUTER #2	
	IDEAL	ACTUAL	ERROR	ACTUAL	ERROR	IDEAL	ACTUAL	ERROR	ACTUAL	ERROR
12.0										
12.0										
14.5										
15.0										
15.0										
15.0										
16.3										
16.7										
16.8										
17.15										
18.8										
19.7										
NON-STD 20.0										

LOW (RED) CELL VISIBILITY DATA (QUARTERLY)

		RESPONSE METER		POLE LOCATION		POLE HEIGHT
L1	L2	PITCH	ROLL	X	Y	Z
		2 30'	-5 0'		250 FT	

MAINT. MAN _____ BRANCH LPO/CHIEF _____

Q/A INSPECTOR _____ MAINT. CHIEF/OFFICER _____

Figure E-24. Fresnel Lens, MK 6 MOD 3 Alignment, Stabilization and Pole Check Data (Sheet 2 of 5)

VLA MAINTENANCE ACTION

DATE _____ JSN _____

FRESNEL LENS, MK 6 MOD 3 ALIGNMENT, STABILIZATION AND POLE CHECK DATA

NOTE: REFER TO THE APPLICABLE MAINTENANCE REQUIREMENT CARD AND ENTER ONLY THE DATA REQUIRED FOR THE PERIODICITY INDICATED.

LINE MODE COMPUTER RESPONSE METER DATA (DAILY/WEEKLY)

COMPUTER NO. 1

DC VOLTS +/-0.005		POLE HEIGHT @ 70' (TOL +/-1.50 IN)			RESP METER READING					
					PITCH (+/-3.0 MIN)			ROLL (+/-6.0 MIN)		
PITCH	ROLL	IDEAL	ACTUAL	ERROR	IDEAL	ACTUAL	ERROR	IDEAL	ACTUAL	ERROR
0.000	0.000									
0.000	-1.500									
0.000	+1.500									
+1.000	0.000									
+1.000	-1.500									
+1.000	+1.500									
-1.000	0.000									
-1.000	-1.500									
-1.000	+1.500									

DC VOLTS +/-0.005		POLE HEIGHT @ 80' (TOL +/-1.75 IN)			RESP METER READING					
					PITCH (+/-3.0 MIN)			ROLL (+/-6.0 MIN)		
PITCH	ROLL	IDEAL	ACTUAL	ERROR	IDEAL	ACTUAL	ERROR	IDEAL	ACTUAL	ERROR
.000	0.000									
0.000	-1.500									
0.000	+1.500									
+1.000	0.000									
+1.000	-1.500									
+1.000	+1.500									
-1.000	0.000									
-1.000	-1.500									
-1.000	+1.500									

MAINT. MAN _____ BRANCH LPO/CHIEF_____

Q/A INSPECTOR _____ MAINT. CHIEF/OFFICER_____

Figure E-25. Fresnel Lens, MK 6 MOD 3 Alignment, Stabilization and Pole Check Data (Sheet 3 of 5)

VLA MAINTENANCE ACTION

DATE _____ JSN _____

FRESNEL LENS, MK 6 MOD 3 ALIGNMENT, STABILIZATION AND POLE CHECK DATA

NOTE: REFER TO THE APPLICABLE MAINTENANCE REQUIREMENT CARD AND ENTER ONLY THE DATA REQUIRED FOR THE PERIODICITY INDICATED.

LINE MODE COMPUTER RESPONSE METER DATA (DAILY/WEEKLY)

COMPUTER NO. 2

DC VOLTS +/-0.005		POLE HEIGHT @ 70' (TOL +/-1.50 IN)			RESP METER READING					
					PITCH (+/-3.0 MIN)			ROLL (+/-6.0 MIN)		
PITCH	ROLL	IDEAL	ACTUAL	ERROR	IDEAL	ACTUAL	ERROR	IDEAL	ACTUAL	ERROR
0.000	0.000									
0.000	-1.500									
0.000	+1.500									
+1.000	0.000									
+1.000	-1.500									
+1.000	+1.500									
-1.000	0.000									
-1.000	-1.500									
-1.000	+1.500									

DC VOLTS +/-0.005		POLE HEIGHT @ 80' (TOL +/-1.75 IN)			RESP METER READING					
					PITCH (+/-3.0 MIN)			ROLL (+/-6.0 MIN)		
PITCH	ROLL	IDEAL	ACTUAL	ERROR	IDEAL	ACTUAL	ERROR	IDEAL	ACTUAL	ERROR
0.000	0.000									
0.000	-1.500									
0.000	+1.500									
+1.000	0.000									
+1.000	-1.500									
+1.000	+1.500									
-1.000	0.000									
-1.000	-1.500									
-1.000	+1.500									

MAINT. MAN _____ BRANCH LPO/CHIEF_____

Q/A INSPECTOR _____ MAINT. CHIEF/OFFICER_____

Figure E-26. Fresnel Lens, MK 6 MOD 3 Alignment, Stabilization and Pole Check Data (Sheet 4 of 5)

VLA MAINTENANCE ACTION

DATE _____ JSN _____

FRESNEL LENS, MK 6 MOD 3 ALIGNMENT, STABILIZATION AND POLE CHECK DATA

NOTE: REFER TO THE APPLICABLE MAINTENANCE REQUIREMENT CARD AND ENTER ONLY THE DATA REQUIRED FOR THE PERIODICITY INDICATED.

TRIM RESPONSE DATA

DAILY

DC VOLTS +/-0.005		RESPONSE METER READING (TOL 3.0 MIN PITCH; 6.0 MIN ROLL)									
		COMPUTER #1						COMPUTER #2			
		PITCH			ROLL			PITCH		ROLL	
PITCH	ROLL	IDEAL	ACTUAL	ERROR	IDEAL	ACTUAL	ERROR	IDEAL	ERROR	ACTUAL	ERROR
0.000	0.000										
0.000	-1.500										
0.000	+1.500										
+1.000	0.000										
-1.000	- 0.000										

WEEKLY

DC VOLTS +/-0.005		RESPONSE METER READING (TOL 3.0 MIN PITCH; 6.0 MIN ROLL)									
		COMPUTER #1						COMPUTER #2			
		PITCH			ROLL			PITCH		ROLL	
PITCH	ROLL	IDEAL	ACTUAL	ERROR	IDEAL	ACTUAL	ERROR	IDEAL	ERROR	ACTUAL	ERROR
0.000	0.000										
0.000	-1.500										
0.000	+1.500										
+1.000	0.000										
+1.000	-1.500										
+1.000	+1.500										
-1.000	+1.000										
-1.000	-1.500										
-1.000	+1.500										

MAINT. MAN _____ BRANCH LPO/CHIEF_____

Q/A INSPECTOR _____ MAINT. CHIEF/OFFICER_____

Figure E-27. Fresnel Lens, MK 6 MOD 3 Alignment, Stabilization and Pole Check Data (Sheet 5 of 5)

IFLOLS MK 13 MOD 0 POLE CHECK DATA

DATE _____ **TIME** _____

CONFIGURATION	LOCATION	POLE HEIGHT	POLE RANGE	POLE LOW	POLE HIGH	POLE ACTUAL
3	L3	69.7	68.0 – 71.3			
4	L2	65.6	63.9 – 67.3			
5	L2	69.2	68.5 – 70.9			
6	L4	47.1	45.4 – 48.8			
7	L5	51.5	49.8 – 53.2			
8	L4	55.7	54.0 – 57.4			
9	L5	42.0	40.3 – 43.7			
10	L4	55.6	53.9 – 57.3			
11	L5	58.7	57.0 – 60.4			
12	L4	49.5	47.8 – 51.2			
13	L5	55.9	54.2 – 57.6			
14	L4	47.2	45.5 – 48.9			

LSO R-1 □ YES □ NO SIGNATURE _____

LSOD-1R □ YES □ NO SIGNATURE _____

IFLOS D-3R □ YES □ NO SIGNATURE _____

IFLOS R-1D □ YES □ NO SIGNATURE _____

IFLOS R-2D □ YES □ NO SIGNATURE _____

IFLOS R-2D □ YES □ NO SIGNATURE _____

IFLOS □ UP □ DOWN

LSO HUD □ UP □ DOWN ELAPSE TIME METER _____

MOVLAS □ UP □ DOWN

W/C SUPERVISOR _____ **BRANCH LCPO/LPO** _____

QA INSPECTOR _____ **MAINT. CPO/OFFICER** _____

Figure 28. IFLOLS MK 13 MOD 0 Pole Check Data/ LSO-IFLOLS Pre-Op Data

Appendix F

ALRE Technical Manuals

ALRE TECHNICAL MANUALS	
MANUAL NUMBER	**MANUAL TITLE**
NA 00-25-100	TECHNICAL MANUAL PROGRAM
NA 00-25-300	NAVAIRSYSCOM TECHNICAL DIRECTIVES SYSTEM
NA 00-25-700	TECHNICAL MANUAL PREPARATION GUIDE FOR TECHNICAL WRITERS
NA 00-80R-14	AIRCRAFT FIREFIGHTING AND RESCUE MANUAL
NA 00-80R-14-1	AIRCRAFT EMERGENCY RESCUE INFORMATION MANUAL
NA 00-80T-105	CV NATOPS MANUAL
NA 01-1A-8	AIRCRAFT STRUCTURAL HARDWARE MANUAL
NA 01-1A-16	NONDESTRUCTIVE INSPECTION METHODS
NA 01-1A-17	AVIATION HYDRAULICS MANUAL
NA 11-75DA-1	RELEASE HOLDBACK BAR ASSY
NA 11-75DA-2	REPEATABLE RELEASE HOLDBACK BAR ASSY
NA 51-5-32	CORROSION CONTROL
NA51-51-15ABB-2	M&O CATAPULTS C13/C13-1
NA51-51-15ABB-3	IPB CATAPULTS C13/C13-1
NA 51-15ABB-4.1	O&I LEVEL MAINT WITH IPB FOR SHIPS STEAM CATAPULTS VOL 1
NA 51-15ABB-4.2	O&I LEVEL MAINT WITH IPB FOR SHIPS STEAM CATAPULTS VOL 2
NA 51-15ABB-4.2	O&I LEVEL MAINT WITH IPB FOR SHIPS STEAM CATAPULTS VOL 3
NA-51-15ABC-2	CATAPULTS C13/C13-1 M&O
NA 51-15-ABC-5	DECKEDGE ICCS OPERATION, MAINTENANCE, & IPB
NA 51-15ABD-2	OVERHAUL AND REPAIR FOR ALL STEAM CATAPULTS
NA 51-15ABD-3	IPB FOR ALL STEAM CATAPULTS
NA 51-15ABE-1	CAPACITY SELECTOR VALVE
NA 51-15ABE-2	DIGITAL ENDSPEED INDICATOR
NA 51-15ABF-1	AIRCRAFT LAUNCHING ACCESSORIES

ALRE TECHNICAL MANUALS	
MANUAL NUMBER	**MANUAL TITLE**
NA 51-5BBA-1.1	ARRESTING GEAR, MK 7 MOD 2 OPS AND MAINT
NA 51-5BBA-1.2	ARRESTING GEAR MK 7 MOD 2 IPB
NA 51-5BCA-1.1	ARRESTING GEAR MK 7 MOD 3
NA 51-5BCA-1.2	ARRESTING GEAR MK 7 MOD 3 IPB
NA 51-20-2	CATAPULT SUPPORT SYSTEMS
NA 51-25-3	VICKERS PUMP
NA 51-25-18	JBD 4-WAY VALVE
NA 51-25-19	NOSE GEAR LAUNCH MK 2 MOD 0
NA 51-25-20	CATAPULTS LAUNCHING ENGINE LIFTING CYLINDER
NA 51-40ABA-8	FLOLS, FRESNEL LENS OPTICAL LANDING SYSTEM MK 6
NA 51-40ABA-9	FLOLS, FRESNEL LENS OPTICAL LANDING SYSTEM, IPB
NA 51-40ABA-10	FLOLS, FRESNEL LENS OPTICAL LANDING SYSTEM, VOL I
NA 51-40ABA-10.1	FLOLS, FRESNEL LENS OPTICAL LANDING SYSTEM, VOL II
NA 51-40ABA-11	FLOLS, FRESNEL LENS OPTICAL LANDING SYSTEM, IPB
NA 51-40ACA-2	VLA, MANUALLY OPERATED VLA SYSTEM (SHIPBOARD)
NA 51-40ADA-1	CONTROLLER, RUNWAY CENTERLINE SEQUENCE FLASHING LIGHT
NA 51-50AAA-1	VLA, INSTALLATION FLIGHT DECK LIGHTING FOR VLA (SHIPBOARD)
NA 51-50ABA-2	VLA ON CV SHIPS
NA 51-60-7	ELECTRONIC CROSSHAIR STABILIZATION SYSTEM (ECSS)
NA 51-70-4	JBD MK 6-2/6-2M
NA 51-70-6	JBD, MK 6-1
NA 51-70-7	JBD, MK 3-1
NA 51-70-10	JBD, MK 6-3
NAEC 51-OR732	ALRE TOOL CONTROL
A1-436-AC-130-010	REPEATABLE RELEASE HOLDBK ASSY
AM-410AA-MAN-000	WMIS, SHIPBOARD WIND MEASURING/INDICATING SYSTEM

ALRE TECHNICAL MANUALS	
MANUAL NUMBER	**MANUAL TITLE**
AM-410AB-MAN-000	WMIS, SHIPBOARD WIND MEASURING/INDICATING SYSTEM
AM-420AD-MAN-000	WMIS, CROSSWIND/HEADWIND COMPUTER
NA 0912-LP-005-8010	SHIPBOARD WINDOW WIPERS, DECKEDGE ICCS DOME
NA 0912-LP-005-7010	SHIPBOARD WINDOW WIPERS, FORWARD ICCS DOME
NS 0947-LP-152-7010	CATAPULTS WATER BRAKE COOLING PUMP
NAWCADLKE-48J500-0007	ALRE I/DPL ADP PROGRAM USERS MANUAL
NAWCADLKE-48J500-0009	ALRE AUTO SHOT/RECOVERY LOG ADP PROGRAM USERS MANUAL
NS 0947-LP-153-4010	CATAPULTS WATER BRAKE PUMP
NS 0947-LP-161-4010	CATAPULTS, CIRCULATING CATAPULT HYDRAULIC FLUID PUMP
NS 0948-LP-069-8010	GLOBE VALVE, TYPE Y
NS 0910-LP-112-9400	CATAPULTS, CONTROL VALVE FOR ACCESSORY FILL AND BLOWDOWN SYSTEM
NS 0965-LP-108-9010	WMIS, WIND IND EQUIP OPS AND MAINT MANUAL
NS 0983-LP-002-7010	ICCS, HEATED DE-ICING WINDOW FORWARD ICCS
NS 0983-LP-002-8010	CATAPULTS, HYDRAULIC FLUID COOLER
NS 9587-AD-MMM-010	ICCS, FORWARD ICCS
NS 9587-AE-MMM-010	ICCS, DECK EDGE ICCS

NOTES

1. Publications listed in this appendix are required for a CV/CVN ALRE Technical Publications Library, subject to a ship's installed equipment configuration. Applicable aperture cards, service bulletins, service changes and repair procedures shall also be held.

2. Refer to CDROM NAVSUP PUB 600 (NLL) on Naval Logistics Library Web site.